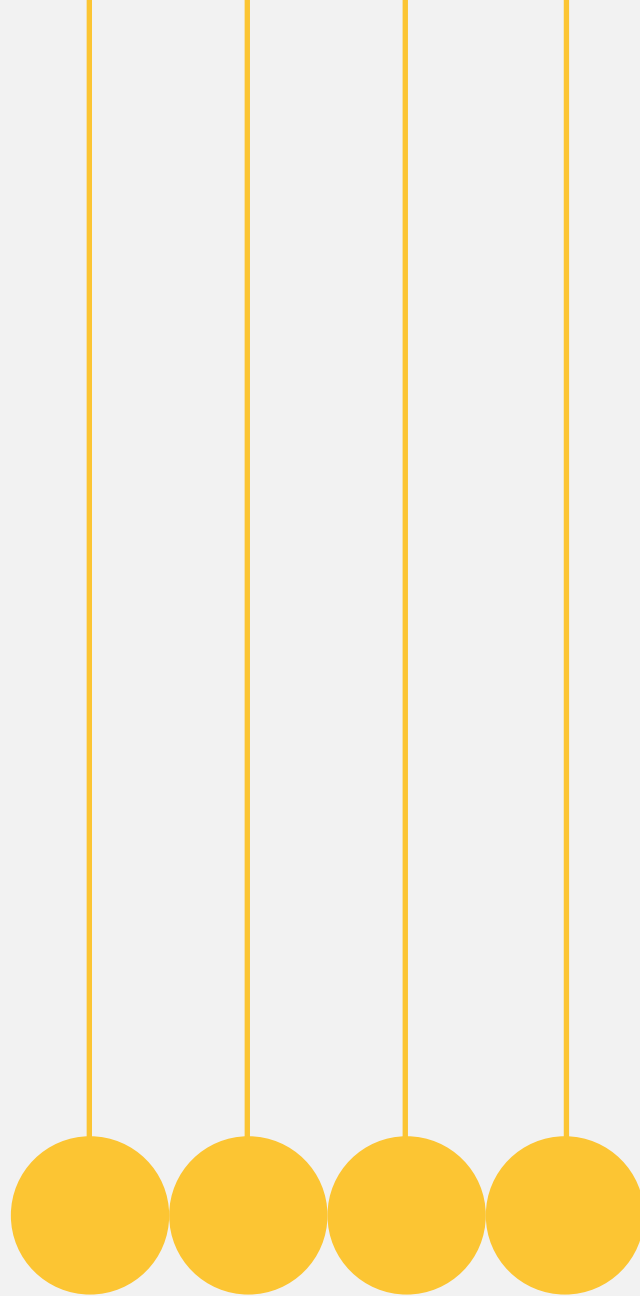




Action Plans



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Introduction to the 2nd ASEF Higher Education Innovation Laboratory (ASEFInnoLab2)

Background
In line with the mission of the Asia-Europe Foundation (ASEF), we create opportunities for higher education managers from Asia and Europe to meet, learn from each other, and build capacity to address common global challenges together. We believe managers of higher education are in a unique position to transform and modernise their higher education institutions by introducing tech-savvy, inclusive and sustainable policies.

About the Project
The 2nd ASEF Higher Education Innovation Laboratory (ASEFInnoLab2) was titled “Universities’ Role in Artificial Intelligence (AI) Innovation Ecosystems”. It was a 6-week long online project, that brought together university managers, administrators and academics to exchange good practices, co-create new ideas and explore areas for collaboration among their institutions. They discussed strategies to enhance the role of their institutions in the development of artificial intelligence innovation ecosystems along the lines of two topics:

- 1. Teaching and Entrepreneurship for AI Innovation Ecosystems
- 2. Research and Technology Transfer in AI Innovation Ecosystems

Summary of the Action Plan
Throughout the project, participants focused on the development of their bespoke action plan. The development of these plans were guided by the facilitators of ASEFInnoLab2, inspired by the experts speaking in each session, and improved in the discussions throughout the project with peers and experts from across Asia and Europe.

The action plan developed by participants are of length. Thus, for the purpose of sharing these plans to inspire further action by universities across Asia and Europe, the participants’ action plans were summarised in this document. Please note that the action plans were designed by participants specifically to address challenges in their own work environment. These are the first few steps towards the significant advancement of their universities’ role in AI innovation ecosystems. The views and opinions expressed by participants in the action plans do not necessarily reflect the views of the Asia-Europe Foundation (ASEF).

The detailed Project Overview is available [here](#).

Participants whose action plan are featured here



Bangladesh DO-Funding



Ms Fatema NUSRAT CHOWDHURY
Assistant professor at the Daffodil International University

Introduction

The Digital Bangladesh Vision is the political manifesto for the year 2021, the golden jubilee of the nation, with huge investment in Information and Communications Technology (ICT) emphasizing the use of IT in business. The Daffodil Group plays the pioneering role to utilize this opportunity to develop entrepreneurs from its 32 institutions.

Summary of the Action Plan

The proposed project is “DO-Funding” which focuses on the challenge “Technopreneurs of Bangladesh facing funding & managerial skill-shortage during start-ups”, thus empowering four institutions of the Daffodil group - Bangladesh Venture Capital Limited, Daffodil Business Incubator, Entrepreneurship & Innovation department, Information Technology, and Management Department and Social Business Forum from Daffodil International University.

Potential Entrepreneurs and five persons from the team would be the stakeholders of this project. To attain the objective of supporting potential technopreneurs in the development of their managerial and technical know-how and learn more about sustainable business model design, the major activities of the team will be:

- Start-up techniques, savings, motivational aspects, tax relief, marketing products by the Entrepreneurship and Innovation Department.
- Automation, AI, IT facility, R&D, breeding and development program by Information Technology and Management (ITM) department.
- Sustainable Social business models designed for financial inclusion plan by Social Business Forum.
- Providing creative ideas, office space, problem-oriented solutions from explorative research in Government approved projects for start-ups and the digitalization by business incubators.
- Funding newbies to develop their businesses by providing a full-scale range of services starting with management training and ending with going public by Venture Capitalists.

Bulgaria

Sofia University St Kliment Ohridski: AI Innovation Hub for University Spin-Offs



Dr Ana PROYKOVA
Professor at the Sofia University - St Kliment Ohridski
Leading Researcher R4 &
Science Director of the Centre of Excellence in ICT (UNITe)

Introduction

The spinoff projects of students from the Sofia University St Kliment Ohridski are usually created to transform technological inventions developed from university research. Despite the important role these spinoffs have in diversifying the market, these spinoffs are rarely sustainable. This is mainly because the founders of these spinoffs are students who do not complete their education program and lack the skills for maintaining a successful business. The data available at the university shows that 82% of the university spinoffs created by students were active for less than 3 years in the market. These university spinoffs are short-lived, and the founders of these spinoffs rarely return to the university to complete their formal education after failing to keep their spinoffs alive.

Summary of the Action Plan

The action plan aims to increase the lifetime of the university spinoffs. The first step in this action plan identified specific reasons for the short lifetime of the spinoffs. Identified reasons relate to lack of strategy, concerns with finances, and operational issues. The action plan focuses on strategic issues. The second step identified the stakeholders e.g., students and professors. This is followed by determining the timeframe of the action plan: 2–3 years. This timeframe corresponds with the average lifetime of most of the unsuccessful spinoffs.

Therefore the possible solution presented is to engage professors that are competent in AI usage and ensure they are involved in the spinoff advisory board. This solution was identified to be promising based on the criteria for success which were identified in the Strengths, Weaknesses, Opportunities, Threats (SWOT) analysis conducted during the discussion held by the university.

Additional findings based on the analysis determined the aim of the university to reduce the dropout rate of students. Students who joined the labour market contribute to the dropout rate. The analysis also helped identify the aim of improving the soft skills of students which are considered important for keeping spinoffs running. Lastly, considered as a criterion for success is the personal involvement of each student e.g., founder, employee, in the workload of the company.

Specific activities are identified for each year of this action plan. For the first year, objectives include the completion of the pre-assignment report and the development of the business plan for the next two years. These specific activities include assigning tasks to all employees, organising workshops with external participants to present the results, and communicating the achievements via networks – Linked in, Research Gate.

The objectives within the second year are to identify Small and Medium Enterprises (SMEs) ready to support spinoffs. The engagement of the university alumni is important in this regard. Additionally, funding programmes should be identified and connections with successful networks should be established.

During the third year of this action plan, the aim is to help selected spin-offs explore the ways AI can potentially impact new venture processes, practices, and outcomes. Additionally, the aim is to examine to what extent technology will augment and replace tasks associated with idea production, selling, and scaling. These changes entail new ways of working and are considered to have implications for the organizational design of entrepreneurial ventures.

Croatia

Faculty of Organisation and Informatics (FOI): AI Innovation Ecosystem



Dr Sandra LOVRENČIĆ
Vice Dean for Education and Students and
Full Professor at the Faculty of Organization and Informatics
University of Zagreb

Introduction

The Faculty of Organization and Informatics (FOI) at the University of Zagreb conducts study programmes at undergraduate and graduate levels in two different fields – information science and economics. In both fields, FOI has active laboratories and centres and also participates in several projects connected to Artificial Intelligence (AI). However, cooperation among laboratories and centres is very loose. Also, students at FOI that study information and business systems and economics of entrepreneurship lack connections between the fields to develop versatile skills for the labour market.

Summary of the Action Plan

To achieve better connection, there should be a higher number of interdisciplinary collaborations of students from different studies and among teachers, as well as interdisciplinary collaborations with IT/AI companies as future employers of students. Better collaboration can be achieved with the organisation of student competitions in interdisciplinary AI project assignments in cooperation with employers, but also with joint AI grade assignments (projects) in two courses from different studies or in interdisciplinary AI scientific projects with roles for students.

As a first step, information collection and analysis of the state of interdisciplinary cooperation on all levels (students, teachers, employers) in the last three years will be performed, which will be a basis for developing the plan for interdisciplinary cooperation. This will also include a selection of courses, teachers and employers. Pilot interdisciplinary AI project activities will be planned, organized and conducted and afterwards analysed. Then it will be decided which activities will be supported continuously and whether they need improvements. Those interdisciplinary AI project activities will be then conducted regularly.

All described steps will be performed as a project by a team of teachers from different fields and will involve other teachers and students, as well as representatives from employers that will participate in certain activities. For that reason, it is expected that intensive critical positive influence (support) will be from laboratories and centres in both fields and IT/AI companies' teams.

The inclusion of students, teachers and employers that will collaborate in interdisciplinary AI projects will enable students to widen and improve their skills with knowledge from another field. Teachers will also better understand another field and improve cooperation and cooperation with employers. Such interdisciplinary cooperation at all levels has the potential to create a mini AI innovation ecosystem.

Hungary

An AI Powered App: Help Students Connect with Each Other and With Mentors



Dr Zsolt Csaba JOHANYÁK
Vice Dean for Scientific Affairs and Professor at the GAMF
Faculty of Engineering and Computer Science
John von Neumann University

Introduction

The main challenge addressed during the ASEFINnoLab training was the low number of startups created by students at the university. University students have good ideas. The necessary tools and technological knowledge are available. However, the students do not reach the next phase of innovation, namely they don't put their ideas into practice.

The five causes identified are (1) lack of information, (2) lack of social skills, (3) fear of the unknown, (4) passivity, and (5) lack of motivation.

Summary of the Action Plan

After some consultation sessions with student representatives and some professors, three potential solutions were identified: (1) development of an AI-powered app that helps students to find each other to form teams and to find the right mentor, (2) development of an AI-powered voice bot or chatbot that supports students in startup-related topics, (3) providing a "startup course" for the students.

Next, the criteria for success were set for the evaluation of the solution candidates: (1) number of students engaged, (2) number of student teams formed, and (3) number of actual startups created. I evaluated all the three solution candidates against the three criteria, and the first one achieved the most points.

Upon determining the criteria for success, it was decided that the action plan would focus only on the development of the AI-powered App that helps students find each other to form teams and to find the right mentor. Working on the assumption that this is a three-year project, objectives were set per year. In the first year there are six objectives: (1) do software project preparation, (2) prepare a business plan, (3) investigate the connection between different influencing factors and the formation of a successful student team, (4) create core software developer team, (5) create the prototype, and (6) ensure funding of the project.

Two strategies were developed with detailed activity descriptions for each objective to be met. After discussing team members, it was decided to pursue Strategy A, where the following activities were planned for the first two objectives: do the requirement analysis, find all the key features that should be taken into consideration, choose methodology (e.g. Scrum+Kanban), do a feasibility study, monitor progress, carry out interviews with the stakeholders, collect data, and analyze data. Lastly, all internal and external stakeholders and their relations to the project were identified.

India

AI Based Student Engagement, Tracking, Reporting and Mentoring System for Higher Education Institutions Socio-Academic Development



Dr Bobby SHARMA
Head of the Department of Computer Science Engineering
Assam Don Bosco University

Introduction

Students in large HEIs face problems relating to lack of engagement and dropping out. It is difficult to prevent these from happening when the reason behind the lack of engagement and dropping out is the student's lack of social skills and coping mechanisms. Based on feedback collected from various organizations, the university was able to determine that students of HEIs were not interested in social engagement. To some extent, some students were not interested in regular studies. Addressing these concerns are challenging because there is a lack of good monitoring and reporting tools.

Summary of the Action Plan

Due to the pandemic, classes are held completely online. It has been observed that teachers find difficulties in understanding the condition of students' mental health and in monitoring the students' activities. Thus, it was identified that there is a need to design and develop an Artificial Intelligence (AI) based tool that can support HEIs in engaging students, help in tracking students' activities, and ease reporting of and to the administration.

Proposed methodology Proposed plan:

1. Identify the criteria for success
2. Understanding the success rate as per objective and criteria assigned
3. Feasibility Study and Requirement Analysis
4. Formulation of the work plan for three years
First Year: Involving IT dept, collecting student's feedback, engaging students, determining the team members and form strategies with activities
5. Contact external resource person
6. Identify all associated entities for process

Workflow Steps:

1. Data collection through questionnaires from students of HEI with respect to the objectives of proposed students.

2. Revise the existing course syllabus to assign AI-based activities and project work.
3. Contact with IT department, people with other relevant departments of University to proceed with the proposed system.
4. Assign students to carry the proposed project along with Supervisors.
5. Organize workshop/lecture series by experts from parent University or other organizations.
6. Mandatory periodic assessment is to be done by the evaluators of the university.
7. Align with the R&D cell of the university to have a look at the AI/ML/Data Science part of the project.
8. After getting positive feedback from evaluators, establish connections with the industry.
9. Apply for grants.
10. Application for IPR (Intellectual Property Right).
11. Implement the developed tool to Higher Education Institute and analyze the results.
12. Based on feedback and data, modify the proposed system.
13. Finally, with the help of the university consultancy cell, enter the market.

In conclusion, based on various studies and analysis, an AI-based students' engagement, tracking, reporting and mentoring system for HEIs is seen to bear great benefit for the university and society.

India

AI-Based Enterprise Resource Planning (ERP) Solution



Dr Dhruva GHAI
Pro Vice Chancellor of the Oriental University-Indore

Introduction

The idea is to use an AI-based Enterprise Resource Planning (ERP) software to make financial and non-financial decision-making processes easier and smoother for the stakeholders in Oriental University.

Summary of the Action Plan

To support decision-making processes, AI will use the data points present in the ERP to help management make better and more accurate decisions given the trade-offs in any situation. The plan also includes the intent to publish and commercialize this solution, allowing the university to help other institutions facing similar problems. This begins with identifying areas of ERP where embedding AI would create maximum impact. The stakeholders involved in the initiative will be university management, teaching staff and administrative staff.

An AI-based ERP solution needs decision-makers and top management to support the initiative in terms of budget and decision-making processes. This affects the higher education institute, physically and virtually, including administrative and teaching offices.

Three criteria for success were identified. The first criterion is the maximization of quality. This includes maximizing the quality of governance, the social environment, and the brand of the ERP solution to attract students.

To develop and test the ERP in making decision making a process easier and smoother for the stakeholders, a three-year plan is proposed. Within the first year, the objective is to identify areas of ERP where embedding AI could create maximum impact. Also, within the first year, ERP will be tested in an area at random as proof of concept. The strategy in place is to consult stakeholders and consolidate a “wish list”. Activities to support this strategy includes determining if AI would solve the problems and to into the accounts.

Within the second year, the results will be published. The feedback from stakeholders will be included in determining the results. And by the third year, the objective is to commercialize the product.

Indonesia

University Strategic Research Plan to Engage AI Industry



Dr Ir Arwin Datumaya Wahyudi SUMARI
Adjunct Professor at State Polytechnic of Malang and Team
Leader of Cognitive Artificial Intelligence Research Group
(CAIRG)

Introduction

Current research produced at the Politeknik Negeri Malang remains is yet to accomplish its full potential in producing high-quality research output and the university struggles in engaging national and international partners. It was identified that this situation is due to the excessive administrative work which takes time away from conducting research and the lack of confidence of decision-makers in taking risks.

Summary of the Action Plan

In response to this context, the action plan primarily focuses on improving the quality and increasing the volume of research done by the university while simultaneously engaging industry partners. The importance of proactively networking with industries is highlighted. Included here is the engagement with potential national and international partners. Central to this plan is the creation of a Research Strategic Plan in line with the national development goals.

The plan intends to improve the quality of research and improve the quality of products that have the potential to be commercialized. Additionally, the plan seeks to increase the number of research outputs, including research proposals submitted for funding from at the national level. Likewise, the plan also seeks to increase the number of collaborations with international companies, governments, and non-government organisations.

Because the plan is anchored on research within a university context, a key indicator for success is the observed increase in the number of Memorandum of Understanding (MoU) and the Memorandum of Agreement (MoA) which the university engages in by the end of 2022.

To accomplish the desired objective, two strategies were developed, Strategy A and Strategy B. Strategy A focuses on determining the industries that match the strategic plan within the first one to two months. Activities within this strategy include the identification of all relevant industries (from start-ups to established companies to) and investigating their capabilities and assessing the possibility of collaborating on research projects. Additionally, one activity identified to advance industry relations was the possibility of partnering with industries for apprenticeship opportunities. Specifically, this plan also intends to investigate the capacity of industry partners to support the achievement of Technology Readiness 5-9 (TRL 5-9) and the possibility for industry partners to commercialize university research products.

As for Strategy B, focuses on enhancing communications with both established companies to start-ups that are interested in research on AI innovations. Included in Strategy B are activities such as introducing the practice of inviting potential industry partners to the university to attend research presentations and observe the research done in labs, inviting potential industry partners to attend and participate in lectures and forums, and promoting the research results that are prospective products for commercialization.

Lithuania

Develop the Entrepreneurship Programme in the Mykolas Romeris University



Dr Lidija KRAUJALIENĖ,
Associate Professor and Vice Dean for Strategic Partnerships
and Innovations, Mykolas Romeris University

Introduction

The Mykolas Romeris University (MRU) is the largest social sciences specialized university in Lithuania. In MRU, the most prominent studies and research areas are law, public security and public administration.

The University has capable and significant core educational science, economics, humanities, communication, politics, psychology, sociology, and management areas. Social science studies programmes dominate the MRU studies programme portfolio (95% of all studies portfolio – AIKOS database) currently, the university lacks an entrepreneurial ecosystem.

Summary of the Action Plan

To advance an entrepreneurial ecosystem in the university, the proposed action plan is focused on the development of an entrepreneurship programme. For the first year of the project, there are five primary objectives:

Objective 1: To create a pilot entrepreneurship programme for students and researchers.

Objective 2: To create the pilot entrepreneurship programme for trainers (train the trainer).

Objective 3: To organize pilot pieces of training for students/researchers and trainers.

Objective 4: To start the creation of infrastructure for startups building (Startup HUB).

Objective 5: To create the contact base of related stakeholders of the Startup HUB.

Additionally, key activities within the first year have been identified. These activities include the building of partnerships with the leading universities in entrepreneurship, designing the entrepreneurship programme, and gathering 50 persons of the direct group.

For the second year of the project, there are two primary objectives:

Objective 1: To update the entrepreneurship programmes for students, researchers, and trainers.

Objective 2: To accept the entrepreneurship programme and start its implementation in the university.

For the third year of the project, there are two primary objectives:

Objective 1: To open infrastructure for building Startups.

Objective 2: To launch 5 startups at the university.

Malaysia

i-Mark: Development of an Ai-Powered Marking Software



Ms Puteri Sofia AMIRNUDDIN
Programme Director of the Master of Laws Programmes and
Senior Law Lecturer at Taylor's University

Introduction

Higher education institutions are integrating the United Nations Sustainable Development Goal 4: Ensure inclusive and equitable quality education and promote lifelong learning opportunities for all. With more access to education, this would increase the number of student enrollment. In turn, this would also increase the number of marks academics need to assess.

The process of marking, especially the essays, are time-consuming. The question then is, how can academics ensure consistency in marking hundreds or thousands of essays per module during the marking period?

Summary of the Action Plan

Hence the objective of this project is to formulate a team and develop AI-powered essay marking software to assist in the marking process to ensure consistency in marking essays and to mark in a timely manner.

The beneficiaries of this project would be school teachers, University lecturers and professors. The stakeholders involved in the project are divided into two categories, namely internal and external stakeholders. The internal stakeholders consist of the Senior Leadership Team, the undergraduate and postgraduate students of Computer Science, Knowledge Transfer, Academics, Commercialization and Bizpod (Incubation Hub). The external stakeholders include the Ministry of Higher Education, AI companies, external lawyer/advisor, University Legal Department and research centres.

The timeline the project is projected to start in January 2022 and conclude in January 2023. It begins with the designing of the blueprint with the experts from the School of Computer Science. It is projected that the process will take approximately 3 months. Once the blueprint has been developed, initial funding is required from the university to cover the basic cost of developing the prototype. By August 2021, it is projected that the development of AI-powered software begins until the end of the year. It will then be followed by a pilot project to test the effectiveness and efficacy of the prototype using the available/existing answer scripts.

The criteria for the success of this project include the ability for "iMark" to grade students work at 50% accuracy in identifying creative and critical thinking answers, 50% accuracy in grading students based on the rubrics and to be able to mark 300 essays in 24 hours.

Two strategies are in place namely working toward the success of the project. The first strategy will establish a team and develop a prototype by the end of 2022. Hence research and development will take place in the first quarter of the year and the gain internal funding to cover the basic cost of developing the prototype in the second quarter of the year. The second strategy will run a pilot project on LMS for one module by utilizing the existing data-set for I-Mark to begin marking using natural language processing.

Malaysia

AI Powered Student Monitoring System



Dr TANG U-Liang
Associate Professor and Head of the Department at the
School of Information and Communications Technology
HELP University

Introduction

HELP University monitors students' academic progress throughout their studies to ensure the quality of program delivery and customer satisfaction. However, ensuring a consistent practice of student monitoring across all the subjects a student takes in the university is a challenge as each student's study plan may be different.

Lecturers and program leaders face challenges of monitoring students' performance manually because of the number of students. They also face challenges administratively in following up with weak students because of the number of reports they must do.

Summary of the Action Plan

Any system that we put in place to solve this challenge must satisfy criteria for success: 1) Minimize man-hours spent on reporting and administrative duties, 2) Higher student engagement and program satisfaction and 3) Better student outcomes in terms of a reduced dropout and deferment rate.

An AI-based prescriptive action recommender can help alleviate the pressures faced by lecturers in carrying out this pastoral duty of advising students. By providing individualised recommendations based on the student's academic performance, lecturers can allocate their efforts to more problematic cases that require their personal attention.

This system will impact the academic community of the university and the whole business rules of the university. The Computer Information Centre is involved as the main party responsible for supporting the infrastructure. The Management Information System Centre is the stakeholder directly responsible for the university's CRM system and hence the party directly involved in deploying the system. The university also interacts with external vendors to develop the AI programme. Senior management must be involved to provide budgetary and political support for the initiative.

To make this project a reality, a three-year plan was drafted, which included objectives to be accomplished within the period. Strategies are developed which comprise activities used to chart the progress of the university in achieving these objectives.

In summary, the university believes that an AI system will bring substantial time and cost savings and bring value to education. Freeing up the lecturer to focus on helping students achieve their highest potential is what the university hopes this system will enable.

Philippines

EduHire: Higher Education Institutions Internship Recommender Engine



Dr Aurora MIRO
Professor and Dean of the University of Cebu-Lapu-Lapu
and Mandaue

Introduction

During the last year in Higher Education Institutions, students scout for a Host Training Establishment (HTE) where they can intern at. Students often base their search for an HTE on their skill set, acquired knowledge, and interests. However, because the skill set of the students is limited, they do not meet all the requirements set by the HTE. Consequently, it takes a long time for students and young graduates to secure a position at an HTE, oftentimes, students then resort to taking internships they have little interest in, but the skill set of the students matches the skillset required by the HTE. In such a situation there is a mismatch of skill and interest. Due to the mismatch, students either lack the knowledge and skills needed in the internship at the HTE or lack interest in their role in the HTE.

On the other hand, Host Training Establishments look for interns who have the skillset and knowledge required for their projects, focusing on what actual work done can be accomplished. However, because of the mismatch of skill set and interests, a significant portion of the internship is focused on building the skills and knowledge through readings and lectures before the actual work or project. This causes delays with the deliverables, causing interns to struggle with adjusting to the job.

Summary of the Action Plan

In response to the situation described, the proposed action plan “EduHire: An HEI Recommender Engine” builds on the idea of helping the students, the HEI and the HTE by providing a fast and manageable means of properly matching Host Training Establishment and student interns. In line with this plan, the following features are identified:

1. The system will provide help students find an HTE that offers an internship position that matches their skills, knowledge, and interests.

2. The HTE will be able to input into the system the required skills for the internship position. A point system or criteria set determined by the HTE can be included in the system. The criteria set can help both the students and the HTE in making their decisions.

3. The interns may also check on the needs or skill requirements of the HTE that they want to intern with and build on those skills to meet the required points or criteria set.

4. HEIs will know what technologies and resources are used in the HTE for the improvement of the curriculum.

The plan will be implemented within 2 years. A group with five members, including two faculty members, 2 Programme Heads, and a representative of the Host Training Establishment, will be formed. There are a number of options to source funds. First, funding can be sourced from private sponsorships from HTE. Second, higher education regulatory bodies provide research grants for internships related to research. These sources of funding can also contribute towards the two main activities of the action plan, which are research and software development for the first version of the “EduHire: An HEI Recommender Engine”.

The determining factors for the success of the action plan are based on the skills and attitudes improved during the internship brought by a greater focus on company projects with real-world tasks that align with the skills and interests of the interns. Furthermore, HTEs can determine their degree of satisfaction with the performance of the interns as they can contribute to the completion of projects and tasks. Lastly, with the positive results of the programme, the employability of graduates will improve, subsequently improving the recognition and ranking of the HEIs in this regard.

Philippines

Information and Communication Technology (ICT) Modernization Plan



Dr Arvin DE LA CRUZ
Chief of the Graduate School Research and Extension
Polytechnic University of the Philippines

Introduction

The pandemic is a major disruptor that has led to changes in the mode of education delivery. The innovations in the mode of education delivery have set a demand for the enhancement of the infrastructure and processes to provide quality services to the stakeholders.

Summary of the Action Plan

The Polytechnic University of the Philippines (PUP) has taken steps forward toward the development and implementation of the ICT Modernization Plan. This plan is one step towards achieving the overall PUP to become an A.I. powered university that caters to the needs of all stakeholders.

The plan is to develop AI-Powered Smart Project Management for the use of the university. This AI innovation will support the university in addressing the needs of the stakeholders and help detect errors in the system. This plan is intended to be implemented and completed within 2022. The objective of the project is to identify all the applied technological systems relevant to the infrastructure and categorize these by systems as either digitization or digitalization. Doing so is a step forward in finalizing the comprehensive ICT Modernization Plan of the University.

A major challenge in this plan is in obtaining adequate funding and securing a budget allocation for the distinct phases of the ICT Modernization Plan. Nonetheless, the idea is to integrate the innovation based on the Technology Readiness Levels 5-9 (TRL 5-7) and implement and deploy the innovation by the last quarter of 2022.

In line with this plan, the university has created a Task Force composed of five teams which primary responsibilities. These teams include but are not limited to: Team 1 which is responsible for the assessment of the digitized and digitalized systems and the infrastructures for the resilient and sustainable systems, Team 2 which is responsible for the assessment of the needs and competency skills of the academic services, Support Services, non-academic technical services; and Team 3 which is responsible for the assessment of the external stakeholders such as students, alumni, other competing departments, members of the community, Department of Science and Technology (DOST), and the Commission on Higher Education (CHED).

The activities in this plan include conducting benchmarking for a technological feasibility study, concluding on the terms of engagement with consultants, monitoring the work of consultants, completing a report for a grant request, identifying the phases and stages of technological innovation in the plan, and defining the possible risk on the system deployment and implementation of the project.

Philippines

University of Baguio: AI-Based Records Management System (UBAIRMS)



Engr Elisabeth D. CALUB
Dean of the School of Information and Technology
University of Baguio

Introduction

One of the most critical components of good governance in a higher education institution is the institution's data quality. Sporadic data locations result in ill-informed decisions. This is complicated further by the fact that the data is out of sync. This is the difficulty that the University of Baguio faces.

Summary of the Action Plan

To address this issue, one solution is to develop artificial intelligence (AI)-based Records Management System. This solution has three objectives during the first year: 1) to conduct an overall evaluation of the current system by the end of the third quarter of the year; 2) to develop the system's requirements based on the evaluation by the end of the third quarter of the year, and 3) to design and develop the needed system using agile methods based on the user requirements. It will also include a rollout of the system once the testing has confirmed its accuracy. The third-year will be dedicated to quality assurance and evaluation of the developed system.

Apart from the development team, the solution involves several stakeholders. The Executive Committee is composed of the university's president and vice presidents, as well as the directors of the Admissions and Records Center, Student Accounts, and Quality Assurance. The Dean's council and the Director of the Management Information System (MIS) Department will be included as stakeholders. Externally, the AI Consultant will be involved in the project. Additionally, the development team will establish relationships with private software development firms specializing in artificial intelligence to gain additional knowledge about how to implement the system. Additionally, the project will include an ad hoc development team from the MIS department, as well as graduate students who will receive on-the-job training.

The first year of the project requires a variety of activities. These are as follows: 1) Meet with the Director of MIS and discuss the proposed system; 2) The Director assigns the task to his pool of developers; 3) The Director coordinates with the Vice Presidents, allowing the developers to conduct the assessment; 4) Following the assessment, a requirements engineering will be conducted through interviews with stakeholders; 5) External developers will be recruited for the system's design and development; 6) Teams will be formed for each module's development. Year 2 will focus on the system's testing. It will entail running the old and developed systems concurrently. The testing will ensure the new system's reliability. It will demonstrate how an AI-based records management system can assist top management in making data-driven decisions.

Year three will be devoted to system evaluation. This year, the primary benchmark will be data quality. Similarly, it will be the year of evaluation of critical success factors (CSF). The CSF for the project will be as follows: a) 10% increase in student enrollment; b) 30% increase in fee collection; and c) 10% increase in data accuracy.

Philippines

Cagayan Valley Centre for Futures Thinking, Innovation, and Acceleration (CVCFTIA)



Dr Giged BATTUNG
Vice President for Partnership and Resource Mobilization of
the Cagayan State University

Introduction

Cagayan State University commits itself to become an agent of transformation by empowering the faculty, students, government and communities to shape the ideal futures. As an educational institution, CSU champions creativity and innovation and realized its mission to become active contributors in providing the learning environment that can immerse the students and stakeholders to achieve competencies and skills of the future.

Summary of the Action Plan

The plan is to develop the Cagayan Valley Centre for Futures Thinking, Innovation, and Acceleration (CVCFTIA) which aims to develop future thinking, creativity, design thinking, social responsibility, and entrepreneurial mindset among the Cagayanos to contribute to the Sustainable Development Goals (SDG) of the country.

The CVCFTIA is where the innovative and creative ideas of the students from various disciplines and communities are developed into products or services to create market opportunities. The Centre empowers the students and communities in various aspects of the business enterprises such as idea development, product design, value innovation, strategic thinking, quality management system, market analysis, financial management, and human resource development. The Centre provides services for the training needs of the students and communities for their ideas or projects to accelerate into enterprising activities and start-ups. The Centre provides an opportunity for the students from various disciplines to meet and collaborate to create a synergy and complementation in the development of the feasibility study, business plan, product development, marketing research, and quality assurance practices that can be applied for funding, grant or financing opportunities.

The focus areas for research and product development are, but are not limited to Food security and sustainable agriculture; Blue economy, Health and Wellness, Green Technology, Creative and multimedia, learning/education, Internet of Things, Data Analytics and Information Technology, Social Enterprise Development, Development of human capital, Digital economy, Agri-Tourism, Alternative Learning

There are several facilities to be developed, such as the Centre will have laboratories and facilities to support the ideation, design and development, research, prototyping, try-out, model development, incubation, and pitching of projects. The Centre will have an e-Weaver, a virtual learning platform that allows participants from different disciplines to find one another, organize their teams, and work on their collaborative projects. The Centre will have an open-access space that can be conveniently

and flexibly be divided by rolling boards to cater to small teams to serve as a brainstorming room, Discussion Room and Product Design Area. The laboratory will have a good internet connection, 3D design printers, software, hardware, supplies, and other facilities that can be relevant to put up the ideas into products or services.

Live Laboratories are highlighted in the action plan. The products can be tested and developed in the existing laboratories of the University such as the following areas: Food Processing Area, Packaging Area, testing/Simulation and Product Display Areas.

Key Innovative Features, Delivery Models and Strategies are identified. Cagayan State University integrates mentorship, service-learning, e-learning, multidisciplinary, community-based and integrative learning approaches in developing the entrepreneurial skills of the students. In the conceptualization of the project plans, the students collaborate from different disciplines that can help them develop their enterprising activities. The integration process for interrelated disciplines is made possible through online learning facilities for multidisciplinary meetings and interactions. Multidisciplinary collaboration in the research and development of products and services can bring great value because of the wealth of knowledge and resources that can be brought into the ideation to incubation process by more researchers and experts. The added value comes from the diverse background of the team members that can complement one another. An Information Technology capstone project can be more productive and relevant if the research team consists of Information Technology(IT) student who will develop the application software; a marketing student who will develop the marketing plan of the software; operation management student who will work on the production and operation strategies; math major student who can develop mathematical models for demand and supply forecasting; accounting student who will prepare the costs and benefits analysis of the feasibility study; English major student who will edit the research output, and/or entrepreneurship student who can pursue the business plan into an enterprise.

If the application software to be developed is on a specific discipline, a student in that discipline can collaborate and be part of the team to provide the necessary concepts and practices. Such as if the software to be developed is a mobile application in teaching a special child, a Psychology student and Education student can be part of the team to ensure that the mobile application will be more reliable and relevant. Conducting an interdisciplinary or multidisciplinary collaborative research team improves the quality and utilization of the research. A pharmacy, engineering or IT student can discover a technology or resource but may not be able to know how this can be launched as a product in the market. This research can be collaborative research with the students from business and other disciplines discovering the product to be more viable in the market. The Centre can put together idea champions, mentors, consultants, venture capitalists and funding agencies to provide. The other aspect of collaboration is the development of community-based enterprises. The students from various disciplines can work collaboratively in the community to develop enterprises based on their resources and needs.

Proposed Multidisciplinary Research Framework
Product and process improvements are not usually carried out by micro-entrepreneurs as efficient as what is needed by the industry because of limited capabilities and resources which result in hindering their business to grow and be competitive. CSU can integrate business incubation processes in their curricular offerings and can bring together people, resources, and technology for complementation. These create synergistic effects among the key players which are the micro-entrepreneurs, academe and the government agencies of Region 2 bringing about value innovation and helping uplift the ecosystem of our country.

Importance is also drawn to student involvement in the centre, incubation processes, promoting entrepreneurial interest among the basic education pupils, ideation, and trade fairs; and making available eLearning tools for multidisciplinary and collaborative business idea development

Philippines

AI Innovation Ecosystem in the De La Salle University



Dr Robert Kerwin C. BILLONES
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De La Salle University

Introduction

The context of this proposed action plan stems from the typical challenges of faculty researchers when navigating in a higher education institution with a focus on teaching, research, and commercialization. Specifically, it highlights the artificial intelligence (AI) ecosystem and initiatives that currently exist in the University. It aims to summarize the challenges and solutions on how to streamline and harmonize the different sets of activities happening in the classrooms, research labs, and commercialization (incubation) spaces.

Summary of the Action Plan

The growth in the current demand for AI, automation, and data science jobs have made universities revisit their programs and course offerings. While knowledge generation and skills development through “Teaching” is the main function of higher education institutions, “Research” is an integral and enabling component to deliver up-to-date and even cutting-edge knowledge and skills in different fields such as “Artificial Intelligence”. There is an increasingly competitive landscape in securing research grants (internally or externally) to achieve the research goals of the University. This grant funding is typically used to hire research staff, maintain facilities, procure equipment, software, and other materials needed to conduct AI research. Additionally, new policies and initiatives on “Commercialization” seem to have a slow uptake from the faculty researchers since it requires a new kind of perspective and a lot of time and effort on their end.

The objectives of this action plan include

- 1) delivering AI courses and topics to engineering undergraduate and graduate students,
- 2) increasing the number of internally and externally funded AI research projects, and
- 3) increasing the number of new partnerships and collaborations for the commercialization of AI technologies.

The proposed strategies to achieve such objectives include a “Connected Strategy for Teaching”, “Enabling Strategy for Research”, and a “Sustainable Strategy for Commercialization”. The detailed strategies and activities include

- 1) development of new AI courses and/or update existing courses to include AI-related topics,
- 2) capacity-building and special training of faculty involved in teaching AI and other emerging technologies,
- 3) having senior faculty researchers lead the grant proposal writing while mentoring junior faculty

researchers and graduate students (MS and PhD) on such activities,

4) capacity-building and special training of faculty, researchers, and graduate students involved in AI research,

5) create a commercialization roadmap and intellectual property (IP) pipeline of the research group, and

6) active communication of University’s commercialization activities in different platforms (e.g., websites, emails, social media, etc).

The action plan also includes stakeholder mapping which includes both internal and external organizations. It highlights the main stakeholders for “Teaching”, “Research”, and “Commercialization”. Some of the internal stakeholders may include undergraduate and graduate students, offices of administrators, academic departments and colleges, department’s board of advisers, research groups, research centres, University Research Coordination Office, Office of the University Legal Counsel, finance and accounting office, intellectual property office, technology transfer office, data protection and data privacy office, information technology services, research ethics office, procurement office, facilities

and management office, and technology business incubator. On the other hand, external stakeholders may include the industry, Commission on Higher Education, other higher education institutions, local government units, local and international professional organizations, local and international intellectual property offices, and national government agencies involved in science and technology, and research.

To conclude the proposed action plan, higher education institutions must provide a safe and thriving culture and environment for faculty, researchers, and other stakeholders. For the part of the faculty researchers, it is important to streamline, harmonize, and balance their work towards achieving the organization’s goals. Commercialization initiatives seem like an extension of the research activities; however, it must be recognized that commercializing technologies needed a different kind of perspective. It must be treated as a separate pillar or initiative with separate and dedicated resources (e.g., grant funding, manpower, facilities, etc.).

Lastly, commercialization initiatives are often the subjects of intensive interest from investors, policymakers and others with an innovation-driven agenda.

Portugal

Connect Research & Innovation to Create Academic Start-Ups and Spinoffs



Dr Luísa CARVALHO
Professor at the Institute Polytechnic of Setúbal

Introduction

When creating start-ups, the challenge the Institute Polytechnic of Setúbal (IPS) faces is mainly the dropout of students once they find employment. Additionally, the academic performance evaluation does not inspire teachers to become more motivated. Based on a rapid diagnosis, three problems were identified:

- Lack of funding
- Perception of the risk
- Teachers' academic aspirations

These problems take into account, to a certain extent, key elements such as the free incubation program for students and the academic community, improved communication to disseminate information about entrepreneurial activities, and the availability of resources for entrepreneurship.

Summary of the Action Plan

The problems can be addressed by focusing on the creation of academic star-ups. The proposed solution will be implemented within 3 years.

In the first year, the focus will be on conducting a University Asset Mapping to capture key assets to support entrepreneurial activities. Additionally, scanning regional challenges with a smart specialization strategy to provide better linkages with stakeholders.

In the second year, the focus will be on searching for partners and developing alliances. And, on the third year, the focus is on implementing the pilot Research & Innovation projects at an international scale, partnering with universities from other countries.

An overview of two strategies was developed to support the objective of the project. First, Strategy A is an “external strategy”, focusing on consulting national and international agencies for funding, and identifying a minimum of one national and one international funder. Second, strategy B is an “internal strategy”, mapping critical internal resources, including the resource of knowledge, human resources, research, and development, among others, the launch of questionnaires in the academic community, creating a database to manage information, and developing a prototype app to manage information.

Portugal

Higher Education: Digital Transformation



Dr Henrique O'NEILL
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Universitário de Lisboa

Introduction

Higher Education Institutions (HEI) are facing the impact of Digital Transformation. E-learning demands new teaching and learning processes, innovative pedagogical approaches and the use of advanced information technologies. This changing situation has to be managed strategically. In particular, it requires lecturers, but also students, to improve their competencies and skills to succeed in this emerging environment.

Summary of the Action Plan

To address this issue, the ASEF InnoLab2 Initiative has enabled to set up a plan comprising the following set of objectives:

1. Set up the ground to foster e-learning initiatives at the HEI (M6);
2. Specify and develop an e-learning training toolkit to demonstrate the use of advanced pedagogical approaches and technologies (M6);
3. Design and build an AI-based platform for improving digital competencies in teaching and learning (M24);
4. Set up an Educational Technologies and Digital Learning Lab (M12).

The approach stresses the importance of defining a strategic plan for conducting the implementation process that integrates the human, organizational and technological contributions. The proposal also considers an advanced e-learning platform, using AI-based technologies - machine learning, gamification and augmented reality - that may answer the challenges of higher education in the years to come. Developing this platform requires analyzing the user requirements to select the most suited pedagogical methodologies and education technologies. A specialized laboratory, able to provide support to users and to develop applied research projects in the e-learning domain, is paramount to further developing this initiative.

Deep collaboration with external specialists – professionals and institutions – is highly recommendable. However, the development of a broader community, comprising professors, students, staff and senior academic decision-makers, is fundamental to consolidate and to further enhance the e-learning knowledge system.

These objectives were defined based on the ISCTE – Instituto Universitário de Lisboa particular requirements. Nevertheless, they may be adjusted to other HEI.

Romania

Collaboration Model Between Employers and Universities



Dr Irina RADULESCU
Dean of the Petroleum-Gas University of Ploiesti

Introduction

In Romania, a paradigm shift is needed regarding the role of universities in the business environment. For the Petroleum-Gas University of Ploiesti, a major challenge is a relationship between it and the economic environment in the region. Two main aspects have been identified that hinder the collaboration between the two environments:

- Low interaction between any parts of the UPG and industry aiming to encourage knowledge and technology transfer
- Mistrust of the business sector towards business development services university-driven

Summary of the Action Plan

The university aims to strengthen the collaboration with the business environment to improve the UPG value proposition, identify new financing and research opportunities, improve educational and research services delivered by our university to the entrepreneurial environment.

The success of this challenge consists in the development of partnerships with companies, the creation of business incubators, the creation of clusters in certain fields in which the university has expertise or alliances of cooperation in the field of research-development-innovation.

As part of the solution could be the development of an AI knowledge platform, the collaboration between universities and technology transfer centres, developing ways of technological vigilance. In many cases, technology and tools are often maintained by their respective teams independently, resulting in highly fragmented information. Between each team (university and its entrepreneurial partners) there is a different data structure, method of organization and generally a lack of ability to provide feedback that will result in the right information updates and curation.

The project has two main objectives. The first objective is to gain faster access to information from universities and companies through automated tools. The second objective is to coordinate intelligence teams almost in real-time with the help of collaboration tools and information flows. The project outcomes include an increase in the number of active partnerships, in R&D common projects and a great involvement in cluster activities.

The main activities considered to be put in place include knowledge transfer events. These bring together both professors, students and companies. The development of technological vigilance to be in touch with technology and especially with the technology and the opportunities and threats arising from it. Lastly, the dissemination of documentation and reports, analysis through conferences, newsletters, factsheets.

Key stakeholders identified are technology transfer centres, AI companies, technological providers, clusters, digital innovation hubs.

Russian Federation

Develop The Digital Professional Me™: An AI-Driven Foresight Tool



Dr Alexey TSELYKH
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Institute of Computer Technologies and Information Security
Southern Federal University

Introduction

Both young and seasoned professionals face growing career uncertainty due to the transformation of jobs and the disruption caused by AI, automation, and the pandemic. Educational opportunities are plentiful but hard to navigate. Existing platforms face a cold start problem. There is a lack of AI-driven foresight tools for skills gap analysis, career planning, and lifelong learning.

Summary of the Action Plan

The plan aims to develop the Digital Professional Me™, an AI-driven foresight tool for skills gap analysis, career planning, and lifelong learning. The key activity in this plan includes the development and implementation of a proof-of-concept. The objective is to obtain project funding, launch an MVP, and validate a business model.

The main stakeholders in this plan are the academic staff and students in master's degree Programmes, the University Grant Committee, Job sites (LinkedIn, hh.ru, Leader-ID), Resume/CV Parser API providers.

The action plan includes two possible strategies, Strategy A and Strategy B:

In Strategy A, preparation for the proof-of-concept will be outsourced. This includes written specifications on the proof-of-concept, investing own money, monitoring progress, presenting proof-of-concept, obtaining a research grant, writing a research paper, and applying for funding. Additionally, the preparation of the prototype will also be outsourced. This includes writing the specifications, funding the development of the prototype, monitoring the progress, and joining a startup accelerator.

In Strategy B, the focus is on developing a university spinoff, working with a team of students, providing the team mentorship, identifying and engaging the right people for the team, with the team presenting the proof of concept. Funding will be provided by the University's Priority 2030 strategic academic leadership program. The plan is to create a buzz in the media, write and defend a proposal, and facilitate the continued growth of the University spinoff by attending and organizing educational events, engaging key partners, continue developing and testing prototypes, launching an MVP, and validating a business model.

Russian Federation

AI Based System to Recommend and Select the Optimal Set of Courses for Students According to Students' Needs and Interests



Dr Maria LAPINA
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Department of Information Security of Automated Systems
North-Caucasus Federal University

Introduction

The North-Caucasus Federal University (NCFU) is one of Russia's ten federal universities, each federal university is a unique academic institution specializing in specific subjects. The purpose of this was to create advanced innovation-driven comprehensive centres for training, research, and business shaping qualified staff meeting the world's top standards.

NCFU aims to arrange training programs for individuals career growth towards employment in leading regional enterprises, thus contributing to the well-balanced performance within the major socio-economic programmes.

North-Caucasus Federal University was established in 2012 as a merger of three largest universities – North-Caucasus State Technical University, Stavropol State University, and Pyatigorsk University for Humanities and Technology. And each of the institutions had gone a long way to build an outstanding history behind. Each of these was established at a certain point through the history of our country to meet the demand experienced in various sectors of the economy – in the Stavropol Region, in the North Caucasus, as well as all over the country. This means that the traditions and history that have been passed to NCFU are priceless as they come from basically every single area of human activity. However, it is not the research and academic achievement that is valued best.

Summary of the Action Plan

The main problem highlighted is that the students in large HEIs find difficulty in choosing courses depending on their interests, level of knowledge, and awareness of necessary skills in their future profession. There are several contributing factors to the problem, such as but not limited to the low level of motivation, low level of variability of the curriculum, low adaptation of the program for each student.

Thus, the proposed solution to the problem is an AI-based system to recommend and select the optimal set of courses for students according to students needs and interests. The main activities needed to see the solution through includes the need to determine the incoming data and the functionality of the system, conduct surveys of students to generate data on which to train a recommendation system, create a system interface and implement an algorithm of work, and integrate into the information system of the university.

The main stakeholders in this action plan include the technology transfer department, other competing departments, and AI companies.

Russian Federation

Higher Education Institutions (HEI): Leading Regional Development



Albert SHAPSIGOV
Director of the Graduate School of International Education
Kabardino-Balkarian State University

Introduction

The Kabardino-Balkarian State University (KBSU) is a classic regional university with the status of a State University since 1957, located at the southern border of Russia in the city of Nalchik, Republic of Kabardino-Balkaria.

17,000 students who come from 43 regions of Russia and 45 countries study a variety of programmes ranging from bachelors, postgrads, and higher education aspirants. Currently, one of the biggest challenges faced by traditional institutions is keeping up with the pace of digital development. Gradually, curriculums are becoming outdated considering the actual demand of the ever-growing digital economy. Within the Republic of Kabardino-Balkaria, there is barely any tech-existing entrepreneurship culture. The connection between frontline tech specialists and HEIs is weak, there is a low level of “digital maturity” in the area (according to federal metrics), and very few success stories and role models.

Because of this context, students who succeed academically are concerned about their careers. Consequently, the best university graduates leave for work in bigger cities and universities.

Summary of the Action Plan

First, the primary objective of this action plan is to resolve the concerns by introducing a common subject in the curriculum: Big Data and Artificial Intelligence (AI). This subject will introduce to 2-3 of the university’s non-technical Higher Education programmes by the end of the year 2022. To begin the development of this subject, the university will invite the best available Information Technology professionals and academics to build the interdisciplinary “Big Data and AI” programme. The objective is to receive the faculties’ confirmation, support, and to launch the programme. Included in the “Big Data and AI” programme are the digital skills needed to become an ideal candidate in the industry.

Second, shifting focus to the first half of 2022, the plan aims to organize a seminar on the digital challenges in the region and develop a collection of case studies in the region with the participation of industry professionals, students, and academia. This seminar will contribute to the discussions on, and understanding of, the regional problems and possible solutions, the competencies, specializations, and resources needed in the region. Additionally, a network will be created to connect industry professionals, students, and members of academia.

Third, the university will further promote the opportunity for students to launch a Start-up (or considerably participate herein), along with/or instead of their course or final projects. Industry professionals will be invited to provide mentorship and support with the promotion and funding of the start-up.

Ultimately, the criteria for success include the following:

1. the emergence of digital culture, awareness, and proficiency of all graduates,
2. growth of HEI and business (tech/digital) cooperation
3. creation of motivational media based on success stories
4. improving employment rates of graduates

The dedicated team behind the plan consists of two active university managers and a seasoned expert with various connections to businesses and the government. This team will expand its influence with potential key allies and stakeholders.

Russian Federation

Workshop Series: Developing an AI Innovation Ecosystem in the Region



Dr Evgeny KOTELNIKOV
Professor at the Institute of Mathematics and Information Systems and Head of the Intelligent Systems Laboratory of the Vyatka State University, Kirov

Introduction

The Intelligent Systems Laboratory conducts extensive research in the fields of Natural Language Processing and Machine Learning. Concretely, the lab solves the essential problems of natural language understanding – sentiment analysis, argumentation mining and text generation. The Lab also trains future professionals in the AI – PhD and Master students.

The Lab has a lot of skills in AI. However, the Lab does not have strong ties with IT companies and other businesses in the region. Thus, the development of the Action Plan.

Summary of the Action Plan

The Lab plans to collaborate with regional companies and develop an AI innovation ecosystem in the region.

One primary reason for the existence of the gap between science and business is the lack of information about the Lab. Therefore, the lab will organize a series of workshops with IT directors of regional companies and business leaders.

Specific actions were identified as part of the plan, namely: to form the schedule of workshops during the year, to define main speakers from the laboratory staff, to find a comfortable conducive venue for the workshop series, to prepare and hold each workshop, and to sum up the results. These steps will allow the lab to accomplish its main objective which is to engage the industry in the region and to establish ties with IT directors and businesses in the region.

Singapore

Nanyang Technological University (NTU), Citizen Science Knowledge Network



Mr Hedren SUM
Lead for Partnerships, NTU Institute of Science and Technology for Humanity (NISTH)
Nanyang Technological University

Introduction

The action plan is centred on the development of a platform to facilitate the sharing of knowledge, resources, and experiences among academia and members of civil society.

Research is critical in Higher Educational Institutes (HEIs) to advance the existing body of knowledge in all disciplines. While academic discoveries are usually expressed in economic value, it is also generally agreed that for important research results such as the invention of the internet, no amount of money could compensate for its cultural, social, educational, political, and societal impact. The impetus of research lies in how research outcomes have influenced people's lives for the better. Frameworks, such as the quintuple innovation helix, highlights the importance of society participating in research and innovation and illustrates the interconnectedness across academia, industry, government, public and the environment.

Summary of the Action Plan

The challenge identified focused on strengthening the interconnectedness of academia, industry, and society. The end goal is to have a platform or infrastructure capable of exploring different approaches to drive new agendas in science and stimulate impactful technological innovation in addressing today's human needs by connecting, involving, and engaging various members of society. Hence, the action plan proposed here put together the thought process in developing the platform that aims to facilitate sharing of knowledge and experiences among academia and members of the civil society, matchmaking, or curating resources for projects and involving citizens in the research process developing solutions for societal problems.

We aim to launch the platform in 2-3 years. In the first year, we will be focusing on defining the requirements, obtaining support from the University's top management and key stakeholders, resources, funding, and strategic partnerships to develop the infrastructure. The team will conduct the necessary groundwork, literature reviews and environmental scanning to define the direction and complete understanding of the current landscape and needs. A clear development schedule, user requirements and technical specifications will also be created. Possible scenarios and validation studies of an early prototype will also be conducted in the initial year.

The success of the project will be determined based on four areas:

- Impact: Availability of resources (tools, best practices) for members of the society to access for facilitating collaboration, understanding current issues, evaluating the impact of AI
- Interdisciplinarity: Draw on approaches, knowledge, and expertise from multiple disciplines
- Social Value: Promote social values, such as cultural value, human dignity, fairness, justice, and transparency
- Sustainability: Supported with a strategy to ensure continuous and inclusive participation.

Spain

Bridging The Gap



Mrs Elizabeth FRANK
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Universidad San Pablo CEU

Introduction

This is a summary of the Action Plan aimed to provide an overview and insights about the Project “Bridging-the-gap” which has been developed under the guidance of the ASEF Innolab2 and the professional mentorship and guidance of Ram Ramachandran. The project proposal has been formulated by Elizabeth Frank, lecturer at University CEU San Pablo in Spain.

Summary of the Action Plan

“Bridging the Gap” is a project that was conceived after identifying substantial differences in knowledge levels in certain subjects such as Statistics, Mathematics or Finance. The reasons for this are multiple, such as having an already “bad track record” or little interest in certain disciplines, poor motivation, or a general lack of understanding of the importance of certain subjects for the student’s professional future.

To be able to level this knowledge gap and provide every student with the same possibility of success, this project was developed. It consists in developing an AI-based solution that will allow for students that have insufficient knowledge, little interest, or affinity for certain subjects to improve their academic performances and successfully graduate. At the same time, it will lower “fail grades” and drop-outs and will provide improved employability of students through the adoption of this new and innovative solution.

The solution is an AI-based multi-tier program that allows to identify and assess a student’s initial knowledge level and learning style. The next phases cater for personalized individual learning and in a subsequent stage for a collaborative learning model that allows to group students with similar profiles and learning styles to work together and overcome their difficulties in a team. The beauty of the program is that it provides academic mentorship at every step of the way.

Important Milestones of the project include mapping the value proposition to stakeholders and sponsors. Building a meaningful showcase prototype will help visualize the value of the project and the funding request, which needs to be formally submitted as early on as possible, ideally during year 1. A formal call to AI solution providers must be launched. Shortlisting and choosing the solution provider followed by the general implementation plan is scheduled for year 2. This is followed by a critical review for scalability to other areas. One of the major goals is to extend this solution to other disciplines, fields, faculties, and potentially other Universities.

This action plan has been formulated as a framework for reflection on how to complete this specific project quickly and effectively. It allows to keep track of the different tasks and allows for the different stakeholders to get aligned about what they need to do and when it needs to get done.

Thailand

Personalized Soft-Skills Training-Guiding System (P-SSTGS)



Dr Suchai NAPPARATJAMJOMRAS
Assistant Professor at the Mahidol University

Introduction

As Mahidol University is the top-ranked university in Thailand, students always intend to be a master in their discipline. Students are happy to pay attention and give effort to the contents and examinations but not the other matters, such as soft skills. In addition, many lecturers, who are masters in their discipline, have difficulty and less confidence to train soft skills to the students. Because lecturers do not know how to teach soft skills, some students may not have enough soft skills.

Soft skills training is a big challenge for Mahidol University. The graduates' future employers need graduates with soft skills. The Ministry of Higher Education, Science, Research, and Innovation has a policy that all universities in Thailand must train soft skills to undergraduate students.

Summary of the Action Plan

To solve the challenge, the three-credit MUGE100 course was created and introduced to most of the first-year students as a fundamental for the other 27 credit courses in the category of general education courses that the main aim is to train students with many soft skills.

The nearly hundred MUGE100 lecturers are recruited from all faculties and work as a group of four in a class of approximately 100 students (there are 42 classes). Many lecturers could not conduct the class as active learning; they run the class passive learning. So, students who unrealized the importance of soft skills pay no attention and less effort to the course. Finally, students could not develop their soft skills to the level that the university expected them to achieve.

Therefore, the project "MUGE100 Build to Build" would like to use AI technology to develop the Personalized Soft-Skills Training-Guiding System (P-SSTGS). This system will train soft skills too and discover the hidden soft skills of the MUGE100 lecturers so they would have an 80% level of confidence to transfer soft skills and conduct the class active learning. This will make 80% of students realize the importance of soft skills and would make the level of students' soft skills development achieve the university expectation.

Viet Nam

Develop Introductory Videos on AI Concepts and Systems



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Introduction

Students of the Ho Chi Minh City University of Economics and Finance (UEF) are required to enrol in a course: Project Development (PD). In this course, students have to solve a problem in real life by developing a project to be presented for evaluation by peers and mentors. Many of these projects integrate the ideas of high-tech applications and AI in project development.

The main challenge that arises is a lack of technical knowledge and knowledge of these technologies since many of the students come from economic and social science backgrounds.

Summary of the Action Plan

The action plan aims to develop a solution. The solution must meet a certain criterion. The first criterion is to improve the soft skills of students in developing the projects using AI. The second criterion is that the solution must help to improve the understanding of AI systems of students from economic and social science majors. The third criterion is that the solution must lead to a better quality of student projects which use AI in the Project Development course.

Based on the criteria, three solutions have been developed. The first solution focuses on writing the guidelines book about AI systems. The second solution provides guest lectures on the topic of AI. The third solution is to make short videos to introduce concepts about AI to students.

Evaluating these three solutions based on the set criteria, it was determined that the third solution would be the best option for the university. Therefore, the action plan will revolve around the development of short videos to introduce the AI concepts to the students.

In line with the solution, the following objectives were set. The first objective is to complete a minimum of 10 videos that introduce AI concepts to students within the year. The second objective is to improve students' understanding of AI systems by 30% by the end of the year. To meet these objectives two strategies were developed. The first strategy will develop the short videos from the scratch. The second strategy will bring in guest lecturers, record their presentations about AI, and edit these into short lively videos.

For strategy A, there are 5 steps, including (1) sharing ideas about AI between students; (2) making the quiz about AI knowledge for students so that they can get the ideas about AI; (3) making the competitions about making a short video about AI; (4) advertising about the competition to other students, especially students in the media clubs; (5) upload the suitable ones on social media.

For strategy B, there are also 5 steps, including (1) finding the guest lecturer about AI; (2) guest lecturer introducing about AI; (3) recording the lecture; (4) editing it into short videos; (5) uploading the suitable ones on social media.

The team to develop the project would be a video making lecturer, an IT lecturer, and students of the different media clubs. The supporters of the team including Communication Department, who would help in advertising the project and uploading it on social media and websites; Student Activities Department who would help us in calling the participant of students; Project Development Center, who take the main responsibility in teaching the PD courses; Research department, who would help in raising the fund for making videos.

The project is expected to begin early in 2022 and is expected to finish within 12 months. After that, there would be a presentation about the results of the project before lecturers, managers and students at UEF.

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Fudan University

Fudan University is a major public research university in Shanghai, People's Republic of China. Founded in 1905, today it is widely considered as one of the most prestigious and selective universities in the country. The QS University Rankings 2021 ranked Fudan as the 7th most reputable university in Asia, while it is classified as a Double First Class University by the Ministry of Education in China. Fudan also actively incubates high-tech industries and encourages them to convert knowledge to power. In return, the multi-pattern development of the high-tech industries helps the University to industrialize the research outcomes.

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Riga Business School (RBS)

Established in 1991 in cooperation with the State University of New York at Buffalo, USA, and the University of Ottawa, Canada, Riga Business School (RBS) is a management – education institution within Riga Technical University (RTU).

RBS was the first higher education institution in the Baltics to offer MBA programs in English, granting its graduates an internationally recognized Masters of Business Administration degree. Since 2012, Riga Business School has been offering a Bachelor of Management in International Business program in collaboration with BI Norwegian Business School and University at Buffalo, USA.

The school has a solid reputation and more than 1015 MBA graduates, the majority of who occupy leading managerial positions both in Latvia and abroad. RBS is the only school in the Baltics offering North-American style MBA both in teaching standards and structure, containing intensive case studies, group work and active classroom involvement over at least two years of studies.

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