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FITPED | AI

Dissemination report

FITPED-AI Future IT Professionals EDucation in Artificial Intelligence

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Organised Events and Important Milestones of Project

14.3.2023 History and evolution of AI at Pi number Day

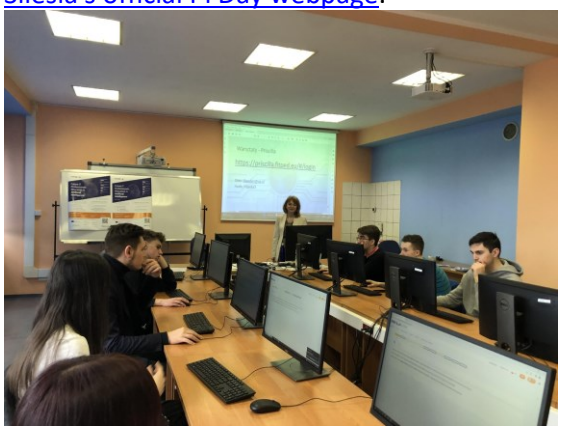
On March 14, celebrated worldwide as Pi Day, a series of workshops and lectures were held at the Faculty of Science and Technology of the University of Silesia. These activities focused on the history and development of artificial intelligence, showing its development from the first milestones to its current capabilities. The most important topics of the workshops included:

- Exploring practical applications and uses of AI in various fields.
- A demonstration of the PRISCILLA application, a tool developed within the FITPED AI project.
- An introduction to free online courses designed to teach the basics of AI.

The event was primarily aimed at high school students and teenagers, offering them a unique opportunity to immerse themselves in the world of artificial intelligence. High school students participated in interactive lessons and activities developed within the FITPED AI initiative. One of the key attractions of the event was the lecture entitled “Artificial Intelligence – Myths vs. Facts”, which captivated the audience. The PRISCILLA application, with its potential for solving AI tasks, aroused great interest and enthusiasm from the participants.

Organizer: Dr. hab. Małgorzata Przybyła-Kasperek, University of Silesia

For more information about the event and its detailed schedule, please visit the University of Silesia's official Pi Day webpage.



20.03.2023 Education for the Future

On 20th March 2023, the IX Wisława Szymborska High School in Sosnowiec hosted a FITPED AI workshop as part of the “Education for the Future” project. This initiative aims to integrate innovative technologies into education and provide students with valuable knowledge and skills for the future.

The session began with an engaging introduction to the fundamentals of artificial intelligence, highlighting its applications, significance, and the opportunities it creates in various fields. The presenters also outlined the objectives of the FITPED-AI project, emphasizing its role in fostering AI literacy and practical understanding among students.

A key part of the workshop was the exploration of the Priscilla platform. Students had the opportunity to familiarize themselves with the platform’s features and browse its diverse selection of AI-focused courses. This hands-on experience allowed participants to gain insights into how the platform supports learning and skill development in AI.

The event concluded with a short test on artificial intelligence, which encouraged students to apply the knowledge they had gained during the session. The enthusiastic response from participants demonstrated their keen interest in AI and the possibilities offered by the Priscilla platform.

This workshop not only introduced students to the exciting world of artificial intelligence but also showcased how innovative educational tools can enhance learning experiences, preparing them for the challenges of the future.

Organisers: The workshop was led by Dr. Kornel Chromiński, Dr. Habil. Małgorzata Przybyła-Kasperek, prof. UŚ, and Dr. Habil. Beata Zielosko, prof. UŚ.

18.4.2023 IT in Nitra 2023

A programming competition ITvNitre for IT high school students took place on for the fourth time at the Faculty of Natural Sciences and Informatics, Constantine the Philosopher University in Nitra. The competition took place in face to face form. The competition was organized for all students who love programming and are skilled in writing programs in Python and Java programming languages.

The competition was organized as a one-day event separately for students and their teachers. The platform PRISCILLA was used as a competitive platform. Competitors solve ten algorithm tasks within the time limit of 90 minutes.

The organizers were pleased with the interest of students from near regions of Nitra, Slovakia. The competition was attended by 23 students from 7 schools and 3 Slovak regions.

As part of the competition day, a multiplication event aimed at disseminating the first part of the project's outputs took place.

Organizers: UKF in Nitra, Teacher.sk

More information at the web of competition itvnitre.sk

25-26.5.2023 Transnational meeting in Vilnius

The third transnational meeting of the FITPED-AI (Future IT Professionals Education in Artificial Intelligence) project took place at the Vilnius University, Lithuania, on 25-26 May 2023.

The participants presented the content of the created courses, evaluated their strengths and weaknesses and interpreted the feedback from the pilot implementations of some modules used in learning. At the same time, they informed their colleagues about other plans and new challenges they encountered during the creation of tasks focused on AI.

When evaluating the content and structure of individual courses, the partnership decided to address the problem of the missing bridge between the mathematical foundations needed to master AI and the knowledge of the public. This knowledge is often very limited, which is why the partnership decided to reach out to the part of the public that is not specialized in technology and thus maximize the impact of the project.

A special course that does not require mathematical or IT experience will be aimed at this part of users and will present the functions and activities of artificial intelligence through games, simulations and interactive projects.

24.10.2023 Multiplier event in Poland

The FITPED AI multiplier event was held on 24th October 2023 at the Faculty of Science and Technology, University of Silesia in Katowice, located at Będzińska 39 Street, Sosnowiec, Poland.

As part of the DLCC2023 Cieszyn-Katowice-Sosnowiec conference, the event was aimed at corporate partners, with 25 participants in attendance. Its primary goal was to introduce the PRISCILLA educational system, its innovative teaching model, and the courses developed under the FITPED AI project.

The event provided participants with the opportunity to explore and evaluate the platform during its post-pilot operation phase. Their feedback, collected through discussions and observations, led to several minor improvements in the model. These adjustments further refined the platform, ensuring it meets both educational and corporate needs effectively.

The FITPED AI multiplier event successfully demonstrated the value of integrating AI-based educational tools into professional settings, fostering collaboration between academia and industry, and advancing AI literacy for practical applications.

Participants were given a comprehensive introduction to the PRISCILLA platform, its capabilities, and its initial series of courses. Under the guidance of trained educators, attendees explored the platform and experienced its educational approach firsthand. This included practical sessions where participants engaged with the courses, gaining insights into the system's potential to support the teaching of artificial intelligence.

A dedicated workshop titled "Priscilla – Introduction of a System to Support the Teaching of Artificial Intelligence" was conducted by a team of experts.

Organizers: Dr. Habil. Małgorzata Przybyła-Kasperek, Dr. Kornel Chromiński, Dr. Habil. Zbigniew Dendzik, Prof. Dr. Habil. Michał Baczyński, Dr. Habil. Beata Zielosko, Mgr Inż. Arkadiusz Nowakowski

9.11.2023 ChatGPT and the Current Trends in Artificial Intelligence

Artificial intelligence is no longer confined to the domain of games; it now plays a significant role in many areas of everyday life. This lecture, organized by the Department of Informatics at FPVaI UKF in Nitra, focused on ChatGPT, a cutting-edge conversational AI model developed by OpenAI. The event explored its transformative potential, practical applications, and inherent challenges. The lecture introduced ChatGPT as a powerful tool for generating human-like responses based on advanced natural language processing and deep learning techniques. It emphasized the diverse applications of this technology, such as enhancing education through personalized learning, supporting healthcare professionals in patient interactions, and streamlining customer support services to improve user experiences.

The presenter also discussed the benefits of ChatGPT, highlighting its efficiency in automating repetitive tasks, processing large volumes of information, and bridging communication gaps, especially in multilingual settings. These advantages showcased the practical impact of conversational AI on various industries.

At the same time, the session provided a critical perspective on ChatGPT's limitations and potential pitfalls. Ethical concerns, such as the risks of spreading misinformation, biases in generated responses, and challenges with ensuring transparency, were examined in detail. Additionally, the speaker addressed the growing dependence on AI tools and the potential implications for critical thinking and human agency.

Organizer: Mgr. Ľubomír Benko, Ph.D, Department of Informatics, Faculty of Natural Sciences and Informatics, UKF in Nitra

12.12.2023 Artificial Intelligence without Secrets

A series of workshops aimed at introducing children to artificial intelligence was successfully conducted for participants aged 10–14 as a part of Silesian Science Festival. The sessions provided an engaging blend of practical activities designed to spark curiosity and foster foundational skills in programming and AI.

The workshops began with a concise introduction to artificial intelligence, explaining its basic principles and real-world applications. Participants were encouraged to think critically about AI's role in society, with special attention given to its ethical and social implications. This discussion helped young learners consider not only the possibilities of AI but also the responsibilities that come with its development and use.

The hands-on portion of the workshops featured activities in Scratch and Python, where children created mini-games utilizing machine learning. Through these projects, participants explored how AI can recognize and respond to images, text, and sounds. This interactive approach allowed them to see the practical side of AI, turning abstract concepts into tangible experiences.

An essential part of the workshop was the introduction of the Priscilla platform, an open educational resource developed as part of the FITPED-AI project. The platform provided participants with tools and resources to continue their learning journey beyond the workshop, combining AI concepts with programming in a user-friendly environment.

Organisers: Dr. hab. Małgorzata Przybyła-Kasperek, Dr. hab. Eugenia Smyrnova-Trybulska, Dr. Kornel Chromiński

12.12.2023 AI - Together on the Road to the Future

As part of the Scientific Café, the Faculty of Natural Sciences and Informatics hosted its second event in the field of informatics, titled "AI Together on the Journey to the Future." This session focused on artificial intelligence and the ChatGPT tool, aiming to expand participants' understanding of AI and its benefits in university studies. The event also presented perspectives from foreign universities on this innovative tool.

The guest speaker, Mgr. Ľubomír Benko, PhD. from the Department of Informatics, delivered an informative lecture that delved into the mechanics of generative AI, highlighting its advantages and current limitations.

During the lecture, attendees gained insights into how generative artificial intelligence operates and explored its potential to enhance educational experiences at the university level. The speaker emphasized the need to maximize the use of generative AI for constructive learning rather than minimizing study efforts.

A lively discussion followed, where participants shared their views on how tools like ChatGPT can be used responsibly to support academic success. The exchange of ideas offered a balanced view of both opportunities and challenges in integrating generative AI into education.

This event successfully combined education and dialogue, fostering a deeper understanding of artificial intelligence and its practical applications in academia. It highlighted the importance of responsible AI use in shaping the future of learning and professional development.

Organizer: Mgr. Ľubomír Benko, Ph.D., Scientific Café, PaedDr. Ivana Boboňová, PhD., and PaedDr. Katarína Zverková

18.12.2024 Launching the next round of questionnaires

Are you curious, excited, or perhaps even concerned about the rapid advancements in artificial intelligence? Do you ever wonder how AI will impact the job market and your future career prospects?

We want to hear from you!

- What do you think about the changing job market in Slovakia and globally?
- What does artificial intelligence mean to students of different study programs?
- Should light versions of AI education be introduced into non-IT study programs?

Join our international survey and share your thoughts on these important topics. Your responses will help us gain valuable insights into how students perceive AI and its role in their education and careers.

By participating, you'll contribute to shaping future discussions on integrating artificial intelligence into diverse academic fields.

Thank you for taking the time to fill out the questionnaire and being a part of this meaningful research!

Questionnaire: https://forms.gle/ujxnVi7pXSJSUN1z7

6.2.2024 IT in Nitra 2024

The Faculty of Natural Sciences and Informatics of the University of Constantine the Philosopher in Nitra hosted the ITvNitre programming competition for IT high school students for the fifth time. The competition was organized for all students who love programming and are skilled in writing programs in the Python and Java programming languages.

The competition was organized for the first time in two forms: face-to-face as a one-day event specifically for students and their teachers. virtually for all high school students The PRISCILLA platform was used as the competition platform. The competitors solved ten algorithmic tasks within a time limit of 90 minutes. The organizers were pleased with the interest of students from the nearby regions of Nitra.

The competition was attended in person by 31 students from 8 schools and 3 regions of Slovakia, and virtually by another 83 competitors from all over Slovakia.

Organizers: UKF in Nitra, Teacher.sk

More information at the web of competition [itvnitre.sk]

6.2.2024 Multiplier event in Slovakia

On February 6, 2024, the University of Constantine the Philosopher in Nitra hosted the third multiplication event, a key part of the IT in Nitra 2024 under the theme How to Teach Artificial Intelligence. This event brought together university employees, secondary school teachers, and students to explore innovative approaches to integrating artificial intelligence into education.

Participants were introduced to the education model, the finalized platform design, and highlights from individual courses. The most engaging aspects of each course were showcased, and attendees actively participated in solving selected projects, making the experience both interactive and inspiring.

As AI continues to gain prominence, it is gradually being incorporated into school curricula. However, understanding its core principles can be challenging for many students. This event emphasized the importance of teaching basic AI concepts in a way that demystifies tabloid myths and alleviates fears of a dystopian AI-driven future. Attendees explored how to present AI as an application of known mathematical and computer science principles, making it more accessible and less intimidating for learners.

The workshop ChatGPT and Its Clones featured discussions on ChatGPT, a cutting-edge Large Language Model developed by OpenAI. Participants delved into its capabilities, such as generating text, translating languages, and creating various types of content. Alongside its potential benefits, the discussions highlighted the risks of uncritical reliance on AI-generated content and the need for a critical approach to evaluating its outputs.

Last workshop Try it with Priscilla in 2024 was introduced new updates, including interactive Python courses which allow students to run and modify code directly within the learning material, offering immediate feedback and results and enhanced learning experience by encouraging experimentation, with AI code in real time, making it easier also for teachers to explain complex principles.

13.6.2024 Teaching Tools based on Virtual Programming Lab

On June 13, 2024, members of the research team from Slovakia as part of their Erasmus exchange stay participated in the event of the School of Computer Engineering at the University of Las Palmas de Gran Canaria hosted the 1st Workshop on the Teaching Tool VPL (Virtual Programming Lab). The event took place at the Computer Science and Mathematics Building on the Tafira Campus and brought together educators and professionals to discuss innovative uses of automatic evaluation tools in programming education.

The workshop included insightful sessions on the current features of VPL, its future developments, and practical experiences from integrating VPL into teaching. First session was focused on Presentation of inovation of VPL by Juan Carlos Rodríguez del Pino, from University of Las Palmas de Gran Canariaand describes new features of Virtual programming lab, future developments, and an engaging Q&A session with attendees.

The second session highlighted practical applications of VPL in education and new ides of its development by Dr. Skalka in presentation "Virtual Programming Lab ideas from using the Priscilla system". He shared his experiences with integrating VPL and the Priscilla system to enhance programming education, providing valuable insights into teaching methodologies.

This session also contains experience from last run of courses based on VPL at ULPCG: "Methodological change in Programming Fundamentals I Course 23/24" by Juan Carlos Rodríguez del Pino, University of Las Palmas de Gran Canaria.

ULPGC Universidad de Las Palmas de Gran Canaria | EII ESCUELA DE INGENIERÍA INFORMÁTICA

CERTIFICATE OF PARTICIPATION

MARÍA DOLORES AFONSO SUÁREZ, SECRETARY OF THE SCHOOL OF COMPUTER ENGINEERING AT THE UNIVERSITY OF LAS PALMAS DE GRAN CANARIA

CERTIFIES:

that **Dr. Ján Skalka** has participated as a speaker in the **1st Workshop on the teaching tool VPL (Virtual Programming Lab)** organized by the School of Computer Engineering at the University of Las Palmas de Gran Canaria, which was held on June 13, 2024, in the Computer Science and Mathematics Building at the Tafira Campus

4.7.2024 Evaluation of the Questionnaire Survey

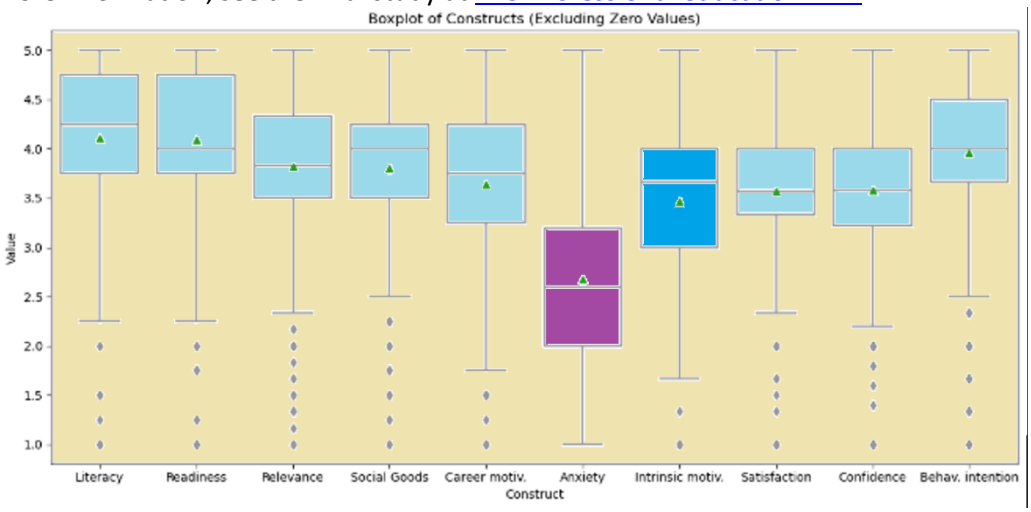
The rise of AI has sparked a wave of research on how individuals, especially students, are preparing for an AI-driven world. Several studies have focused on the development of AI literacy, attitudes towards AI, the role of education in preparing students for AI, and the socio-economic implications of AI for future career prospects.

Our AI literacy survey, conducted over two years and involving over 1,000 students, yielded several interesting findings:

- Men demonstrated higher levels of AI readiness and satisfaction with AI learning than women. Men were also more likely to perceive AI as relevant to their future careers. This finding may suggest a need for initiatives to promote women's engagement and interest in AI.
- Students in IT-related fields exhibited significantly higher levels of AI readiness and satisfaction with learning AI compared to students in other fields. This difference might stem from the inherent alignment of IT studies with AI concepts, leading to a more informed and prepared outlook.
- Interestingly, satisfaction with learning AI did not necessarily increase with the year of study. The study showed mixed results with some questions indicating higher satisfaction in early years while others showed a slight decrease in later years. This challenges the assumption that continuous exposure to AI necessarily leads to greater satisfaction and hints at the complexities of student perception towards AI throughout their education.
- The study also found that the year in which the survey was taken influenced student satisfaction levels, potentially due to major developments in AI technology. A notable increase in satisfaction was observed in 2023, coinciding with the release of advanced AI models, suggesting that technological advancements and their visibility play a role in shaping student perceptions.

These findings highlight the need for tailored educational approaches that consider individual backgrounds and evolving technological landscapes. Promoting AI literacy and readiness among diverse groups requires an understanding of these nuanced differences

For more information, see the final study at R13-Professional education in AI.



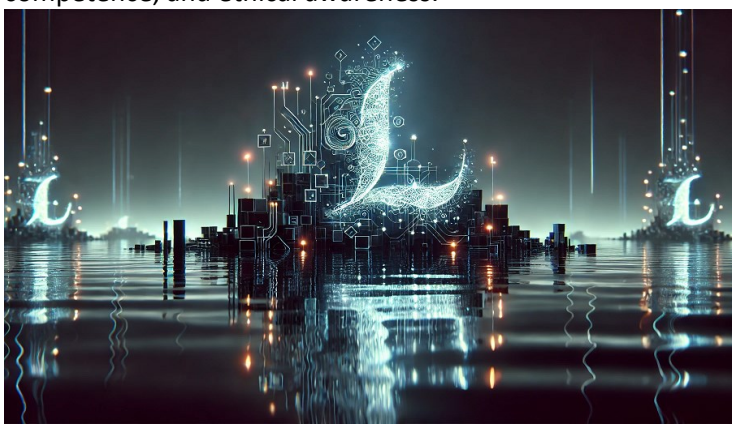
1.9.2024 Acquisition of a new project - FITPED GAI

The partner consortium has reached an important milestone with the successful acquisition of an Erasmus+ project focused on integrating Generative Artificial Intelligence (GAI) into education – FITPED-GAI (2024-2027). As GAI becomes increasingly vital across numerous professions, understanding its strengths, limitations, ethical implications, and trustworthiness is essential. This project aims to design and validate an educational model that addresses these needs, providing tools and methodologies for students, teachers, and future employees.

The educational model is designed to enhance learning experiences for students, support teachers in preparing effective lessons, and equip future professionals with workplace-ready skills to innovate using GAI. At its core, the project seeks to develop a comprehensive system that integrates cutting-edge AI tools into educational processes, fostering digital literacy, innovation, and inclusive education.

A significant outcome of the project is the creation of a validated educational model that includes a series of online courses focused on AI and GAI. These courses are aligned with the latest advancements in education and tailored to meet the needs of diverse audiences. The project also aims to build capacities for individuals outside of IT fields, train teachers to incorporate GAI effectively into their teaching, and develop advanced programming and innovation skills for specialized applications.

By supporting both technical and non-technical audiences, this initiative plays a crucial role in modernizing education and preparing professionals to navigate a GAI-driven future with confidence, competence, and ethical awareness.



16-17.9.2024 Transnational meeting in Slovakia

The final project meeting was held on September 16-17, 2024 to assess progress, discuss the finalization of deliverables, and plan activities for the final phase of the project. Over the two days, participants engaged in productive discussions, presentations, and strategy development to ensure the success of the project.

The presentations included an assessment of the project deliverables, including an introduction to artificial intelligence, data preprocessing techniques, knowledge discovery, machine learning, deep learning, natural language processing, learning analytics, AI in cybersecurity, recommender systems, and AI modules for educational systems. Individual leaders provided updates on changes and the final form of the courses and upcoming course publications.

The team also discussed project management elements, including budget status, task status, and backlog. The results of quality monitoring, the final platform design, and new modules were presented in the context of the content created, student engagement, and dissemination.

Discussions on the final draft of the AI Professional Education study finalized the current chapter design and primarily addressed active and personalized learning methods, real-time feedback techniques, microlearning, gamification, and data-driven approaches to solving challenges. The team also discussed the final draft of the AI Age Readiness study and summarized next steps, concluding the meeting with a shared vision for completing the project.

26.9-27.9.2024 Multiplier event in Lithuania

The last multiplication event was held as part of the international event Think computationally with Bebras (Event for the 20th Anniversary of the Informatics and Computational Thinking Challenge).

It took place over two days, with the project's ideas and outputs presented in plenary on the first day and in blocks through workshops on the second day. In four 30-minute blocks, the most important project results summarized in the R13 study and presented via the R12 platform were presented and discussed.

Within each block, a different group of outputs was always selected so that, on the one hand, participants could choose a topic they were interested in and, on the other hand, all outputs were presented evenly. In total, 32 participants, consisting of teachers, company representatives and students, participated in the individual parts.

26.9.2024 Does AI Understand You? How ChatGPT Works

The Technical Symposium at Gymnasium of Cyril and Method i Nitra was held on September 26, 2024 and provided an opportunity to explore future trends, both technological and professional. Among the highlights was a compelling lecture by Prof. Jozef Kapusta, PhD., from the Department of Informatics at the University of Constantine the Philosopher in Nitra. His presentation, titled "Does AI Understand You? How ChatGPT Works", offered valuable insights into the evolving landscape of artificial intelligence.

In his talk, Prof. Kapusta introduced the audience to the foundational concepts underpinning AI systems like ChatGPT. He explained that while AI may seem to "understand" human inputs, its operations are rooted in complex computations performed on vast datasets, known as corpora. These databases consist of an extensive collection of textual information that AI models analyze to generate meaningful outputs.

A key point emphasized during the lecture was the role of large-scale vector calculations. Prof. Kapusta explained that these vectors represent words, phrases, and sentences in mathematical forms, enabling the AI to identify patterns and relationships within the data. Through iterative training and refinement, AI systems improve their ability to produce coherent and contextually relevant responses, making them increasingly effective for practical applications.

Students attending the session gained a deeper appreciation for the continuous advancements in AI technology. Prof. Kapusta highlighted the importance of such improvements, which allow AI systems to better interpret user inputs and provide responses that align with human expectations.

The lecture not only shed light on the mechanics of AI but also inspired attendees to consider the broader implications of these technologies in professional and everyday contexts. By demystifying the inner workings of ChatGPT, Prof. Kapusta underscored the significance of ongoing research and development in making AI a valuable tool for various fields.

9.10.2024 Virtual Learning Environment for Programming Learning - an invited speech at DidMatTech 2024 conference

On October 9, 2024, Jan Skalka delivered an invited speech at the international conference DIDMATTECH 2024 organized under the auspices of the rector of J. Selye University Dr. habil. PaedDr. Juhász György, PhD. The presentation focused on topics from three Erasmus+ projects conducted by the FITPED consortium, emphasizing innovative educational methodologies in programming education.

He addressed the critical issue of bridging the gap between algorithmic thinking and its application in writing program codes - a key skill required for employment in the IT sector. While pupils are introduced to algorithmic skills from the early years of primary education, many struggle to translate these skills into programming. This challenge is particularly evident in higher education, where programming language courses remain among the most demanding, with high failure rates.

The presentation highlighted a novel approach to addressing these challenges by adapting educational methodologies to the learning habits of Generation Z students. Recognizing the preference of this generation for smartphones, brief information displays, and immediate feedback, the proposed solution integrates these elements into programming education.

Central to the approach is the use of automated assessment systems and microlearning lessons. These tools provide short, focused content that aligns with the limited attention spans of learners while offering immediate feedback to reinforce understanding. Additionally, generative AI plays a crucial role by addressing frequently repeated questions, thereby enhancing the learning experience and reducing instructor workload.

The lecture also explored the potential of virtual educational environments to overcome beginner-level difficulties in programming. When designed effectively, these platforms can provide personalized support, foster engagement, and create a more accessible path for students to develop programming skills.

The presentation underscored the importance of leveraging technology and innovative teaching practices to improve programming education. The insights shared during the presentation offered valuable perspectives for educators and institutions aiming to prepare students for the evolving demands of the IT industry.

The article covered presented topics: Virtual Learning Environment for Programming Learning, http://didmattech.ujs.sk/invited-speakers/

31.10.2024 Finalization of the Project FITPED-AI - Summary report

The FITPED-AI project concluded on October 31, 2024, with its outputs and lessons learned consolidated in the study titled Professional Education in AI. This project addressed the critical need for artificial intelligence expertise as AI continues to reshape industries and societies.

The rapid integration of AI into diverse fields has created an unprecedented demand for professionals skilled in designing, developing, and implementing AI technologies. While AI expertise encompasses a wide range of skill levels, higher education institutions play a pivotal role in cultivating the talent pool necessary to meet this demand.

Universities and colleges provide students with structured pathways to build their theoretical knowledge and practical skills in AI. Through comprehensive curricula, students explore foundational concepts such as machine learning, data analytics, and AI ethics, while gaining hands-on experience through research initiatives and applied projects. These educational experiences not only prepare students for real-world challenges but also form the foundation for addressing the pressing need for AI professionals.

The strategic importance of higher education in AI development has made research in this field a priority. Understanding how AI concepts can be effectively introduced, taught, and assessed within academic settings is critical for designing curricula that align with industry expectations. Simultaneously, higher education institutions are uniquely positioned to promote ethical and responsible AI development, ensuring that students are equipped to navigate the societal implications of their work.

By emphasizing higher education as a cornerstone for building AI literacy and competence, the FITPED-AI project and its accompanying study aim to bridge the gap between the growing demand for AI expertise and the current supply of qualified professionals. The insights gained through this project will serve as a valuable resource for educators, policymakers, and industry leaders striving to meet the challenges of an AI-driven future.

21.-22.11.2024 FITPED GAI – Kick-off meeting

The kickoff meeting for the **FITPED-GAI: Future IT Professionals Education in Generative Artificial Intelligence** project took place on **November 21–22, 2024**, at Constantine the Philosopher University in Nitra, Slovakia. The meeting brought together consortium members to define project objectives, outline activities, and establish a clear path forward.

The meeting began with an overview of the project's goals and structure, emphasizing the development of an innovative educational model. This model integrates generative artificial intelligence into learning and teaching processes for students, educators, and future professionals, addressing the growing demand for AI expertise across industries.

The morning sessions started with a presentation of the project's objectives and an introduction to its structure. This was followed by a discussion on **Work Package 1**, which focuses on effective project management to ensure the successful coordination and timely delivery of outputs.

Later, the team delved into **Work Package 2**, which targets non-IT university students and employees. This work package aims to create accessible introductory courses on artificial intelligence, tailored to diverse academic specializations. These courses will provide foundational AI knowledge while enhancing digital skills without overwhelming participants with technical complexity.

After a lunch break, the discussion shifted to **Work Package 3**, the most significant component of the project. This work package focuses on the development of generative AI courses for students and teachers. The courses will address critical thinking, ethical considerations, and practical applications of GAI in various fields. Plans for integrating GAI into university policies and disseminating project outcomes through publications and events were also outlined.

The day concluded with a dinner that facilitated informal discussions and networking among participants, fostering collaboration and idea exchange.

The second day began with a session on **Work Package 4**, which explores the use of GAI in programming education. The focus is on designing courses for beginners and advanced students, helping them overcome challenges in learning programming. The courses aim to reduce dropout rates, enhance learning efficiency, and support teachers in integrating GAI into their programming classes.

This was followed by a discussion on **Work Package 5**, which examines the technological foundations of GAI and the development of software modules for the project's courses. The session also highlighted plans to create manuals and tutorials for the Priscilla educational system, ensuring that teachers and students can effectively utilize GAI features in their learning environments.

The meeting concluded with an open discussion, allowing participants to share feedback, address any concerns, and align on strategies for project implementation.

Publications

The project team published the following scientific papers where the team presents the findings and experience with the realisation of the project FITPED-AI and disseminate ideas of project. The following papers have been already accepted and published in the journals and proceedings, which are indexed in the Scopus and Web of Science databases.

Scientific Papers Published in 2021

- Halvoník, D., Kapusta, J., & Munk, M. Improve estimated time-on-task calculation in a Virtual Learning Environment. Interactive Learning Environments, 31(5), 2914–2929. 2021. https://doi.org/10.1080/10494820.2021.1913609
- Dolgopolovas, V., & Dagiene, V. On the Future of Computational Thinking Education: Moving beyond the Digital Agenda, a Discourse Analysis Perspective. Sustainability, 13(24), 13848. 2021, https://doi.org/10.3390/su132413848
- Skalka, J., Drlik, M., Benko, L., Kapusta, J., Rodríguez del Pino, J. C., Smyrnova-Trybulska, E., Stolinska, A., Svec, P., & Turcinek, P. Conceptual Framework for Programming Skills Development Based on Microlearning and Automated Source Code Evaluation in Virtual Learning Environment. Sustainability, 13(6), 3293, 2021. https://doi.org/10.3390/su13063293

Scientific Papers Published in 2022

- Skalka, J. & Drlik, M. (2022). Proposal of Artificial Intelligence Educational Model Using Active Learning in a Virtual Learning Environment. DOI 10.34916/el.2022.14.02. In: E-learning : E-learning, vol. 14 / Eugenia Smyrnova-Trybulska. – Katowice : University of Silesia in Katowice, 2022. – ISBN 978-83-66055-31-5. – ISSN 2451-3644, p. 15-28.
- Pecuchova, J. & Drlik, M. (2022). Identification of Students With Similar Behavioural Patterns Using Clustering Techniques. DOI 10.34916/el.2022.14.09. In: E-learning : E-learning, vol. 14 / Eugenia Smyrnova-Trybulska. – Katowice : University of Silesia in Katowice, 2022. – ISBN 978-83-66055-31-5. – ISSN 2451-3644, p. 257-267.
- Kuzminska, O. – Morze, N. – Smyrnova-Trybulska, E. (2022). Artificial Intelligence in Education: A Study on Using Bibliometric Systems. DIVAI 2022 – The 14th international scientific conference on Distance Learning in Applied Informatics. ISBN 978-80-7676-410-1 ISSN 2464-7470 (Print) ISSN 2464-7489 (On-line), p. 393-403.
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