

EDIH Czech Technical University in Prague

EDIH CTU

European Digital Innovation Hub in the Czech Republic in the field of
Artificial Intelligence (AI) and Machine Learning (ML)

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Deliverable D4.1

E-learning materials

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List of Abbreviations and Acronyms

AI	Artificial Intelligence
CTU	Czech Technical University in Prague
EDIH	European Digital Innovation Hub
EDIH CTU	European Digital Innovation Hub at the Czech Technical University in Prague
GDPR	General Data Protection Regulation.
HR	Human Resources.
ICT	Information and Communication Technologies.
ML	Machine Learning.
MoLSA	Ministry of Labour and Social Affairs (Czech Republic)
WP	Work Package

1. E-learning materials

The E-learning Materials document is a compilation of an array of educational resources focused on the domain of Artificial Intelligence (AI). It contains content ranging from videos, interactive e-learning, courses, websites, and more. Each entry is accompanied by a description, enabling users to quickly discern the content's relevance, and a link to this source. These resources span from introductory materials for AI novices to advanced content.

The primary purpose of this document is to offer a structured and user-friendly guide for individuals and institutions keen on enhancing their understanding of AI. In an era where AI is rapidly evolving and permeating various sectors, there is an increasing demand for accessible and high-quality educational content. This document addresses that demand, serving as a one-stop-shop for AI enthusiasts, students, educators, and professionals. By centralizing a diverse range of learning materials, the document aims to streamline the educational process, making it easier for learners to navigate the vast ocean of AI information and continue their learning journey.

All the resources detailed in this document are conveniently published on the EDIH CTU project website. This ensures that users have direct and immediate access to the described content, facilitating learning and exploration directly from the platform.



2. Resources

Title	Description	Link
Elements of AI	Elements of AI is a free online course for anyone who wants to learn what AI is, what it can and cannot achieve, and how it affects our lives. No advanced math or programming knowledge is required to take the course. In addition, participants in this course, which combines theory with practical tasks, will learn how they can start creating AI-based methods. The course can be completed at your own pace and ends with a certificate.	https://www.elementsofai.cz/
AI and its use in companies	Recording of a workshop to present and discuss the possibilities of using AI-based tools / machine learning in companies. During the workshop, current AI trends and the process of AI implementation in companies were presented. Furthermore, specific use cases of AI in the pharmaceutical industry and banking were presented. This was followed by a panel discussion focused on the topic of AI implementation in companies.	https://www.youtube.com/watch?v=iFDZIFHoQjg
Generative AI in companies	<p>A recording of a workshop that introduces the possibilities of using generative AI (such as ChatGPT) in a corporate environment, as well as specific examples and benefits of these tools for business.</p> <p>The following questions were answered during the workshop:</p> <ul style="list-style-type: none"> - What is generative AI and what are its main areas of application in companies? - How can ChatGPT and similar tools improve client communication and internal processes? - What are the possibilities of integrating generative AI into company systems and how is the implementation done? - What are the ethical, legal and regulatory considerations and constraints associated with the use of generative AI? - What is the expected evolution of generative AI and how can companies prepare for it? 	https://www.youtube.com/watch?v=ustV7GPnI-Q

Title	Description	Link
Generative AI in companies	<p>A recording of a workshop that introduces the possibilities of using generative AI (such as ChatGPT) in a corporate environment, as well as specific examples and benefits of these tools for business.</p> <p>The following questions were answered during the workshop:</p> <ul style="list-style-type: none"> - What is generative AI and what are its main areas of application in companies? - How can ChatGPT and similar tools improve client communication and internal processes? - What are the possibilities of integrating generative AI into company systems and how is the implementation done? - What are the ethical, legal and regulatory considerations and constraints associated with the use of generative AI? - What is the expected evolution of generative AI and how can companies prepare for it? 	https://www.youtube.com/watch?v=ustV7GPnl-Q
TO MÁŠ - portal of the Chamber of Commerce	<p>The Chamber of Commerce portal acting as a signpost and search engine for relevant online courses, including AI applications, tips and tricks. It also features a general search engine for ICT solutions and suppliers.</p>	https://to-mas.cz/#/
IBM SkillsBuild	<p>Free courses for more advanced users. Filtering of courses is possible by target group - high school students, university students, adult students. Some courses are translated into Czech. Completed with a certificate.</p>	https://skillsbuild.org/cs/advanced-learners/explore-learning/artificial-intelligence
Google Digital Garage	<p>The courses are free of charge and in English will guide you through the basics of a promising field. Three categories of courses: digital marketing, career development and data.</p>	https://grow.google/intl/cz/courses-and-tools/?category=career&topic=ai
Machine Learning College	<p>These teaching materials are created with the support of prg.ai and the City of Prague as a supplementary text for teaching artificial intelligence at secondary schools within the AI Academy and do not have the ambition to be a comprehensive textbook for self-study. However, they can serve anyone who wants to get a basic picture of the field of artificial intelligence.</p>	https://www.mlcollege.com/umela-intelligence-prokazdeho/
Retraining courses of the Ministry of Labour and Social Affairs	<p>E-shop of retraining courses of the Ministry of Labour and Social Affairs. Subsidized courses will enhance your professional resume, add knowledge for career growth and increase your value in the job market. The MoLSA will pay 82% to 100% of the course price for you up to a maximum of CZK 50,000.</p>	https://www.uradprace.cz/web/cz/vyhledani-rekvalifikacniho-kurzu?typKurzu=1.4
Jan Romportl on AI	<p>Jan Romportl is an AI-human. He studied cybernetics and artificial intelligence, then led</p>	https://www.youtube.com/watch?v=QKJfnEBWOI

Title	Description	Link
	the renowned AI center O2. Now he is a freelance AI expert and consultant. In a new interview, he and Robert Vlach talk about the rise of AI.	
AI in context	AI in context is a series of lectures and follow-up discussion seminars called AI in Context, where selected experts offer the audience diverse perspectives on artificial intelligence in the context of different disciplines (e.g. art, law, ethics, security, philosophy).	https://www.youtube.com/playlist?list=PLaQcpTQYTUSRE-8U2ZI8D5TplxutleRFB
E-book generative AI vs. law	A handbook that helps users of generative AI answer basic questions: - What questions or images can you submit to the AI for processing? - How do you need to publish AI responses? - What rights do you have to the output you create? - Can someone sue you for the AI output you publish?	https://cutt.ly/kroupahelan_AI
General introduction to artificial intelligence for adults	Educational material created to offer beginners a basic insight into Artificial Intelligence (AI). The chapters of this guide have been developed by experts so that they do not require specific initial knowledge or skills.	https://aidetem.cz/obecny-uvod-do-umele-intelligence/
Educast on AI	A comprehensive format of interviews with experts on various areas related to AI, guided by moderator Sara Polak.	https://aidetem.cz/educast/
Tips on AI applications according to their intended use	A signpost to various applications of generative AI (e.g. text, image, video generators, digital personas, etc.).	https://aidetem.cz/tipy-na-aplikace-umele-intelligence-dle-ucelu-uziti/
AI and the Labor Market: Evolution or Revolution?	AI is fundamentally transforming the labour market – the automation of routine tasks and the deployment of AI in areas such as manufacturing, logistics, and administration bring greater efficiency, but also raise concerns about potential job losses. Conference Recording focused on the future of work: Which professions will disappear, and which new ones will emerge? What roles will AI replace, and where will it instead create space for human creativity, empathy, and technological expertise?	https://www.youtube.com/watch?v=p_AUIFe6ag
What Are the Main Challenges of AI and How Can We Prepare for the Future?	How will AI impact the labour market, and how can individuals and organizations adapt to these changes? What skills will be essential in the AI era, and how should education systems evolve? And how can we ensure that the development of AI aligns with ethical standards and human values?	https://www.youtube.com/watch?v=9Uqc8a4Pi9E

Title	Description	Link
	These are some of the key questions explored in the 200th episode of the DEEP TALKS podcast, featuring Professor Michal Pěchouček, a leading Czech AI expert.	
Czechia Has Its Own AI Curriculum for Primary and Secondary Schools	Recording of press conference that presents the concept of the AI curriculum and features a panel discussion with experts from public administration, the non-profit sector, education, and students themselves. The debate will focus on the role and purpose of education in the era of AI. The event is intended for educators, professionals, and anyone interested in educational innovation.	https://www.youtube.com/watch?v=QspQHOrK82s
AI curriculum	A new educational framework for teaching AI in primary and secondary schools has been developed in response to this need, thanks to the collaboration between the organization <i>AI dětem</i> and the National Pedagogical Institute of the Czech Republic. The framework includes nearly 50 methodological materials across various subjects and is freely available to anyone interested.	https://kurikulum.aidetem.cz/
Progress in AI	Discover the world of artificial intelligence with expert Stanislav Fort! This newsletter delivers the latest news, in-depth analyses, and practical tips on how AI is transforming our lives, work, and society. Join a community of readers eager to understand the newest trends and stay one step ahead in the digital age.	https://stanislavfort.substack.com
Media<AI>monitor by prg.ai	Every 2-3 weeks prg.ai media<AI>monitor summarizes the most important news from the Czech AI scene that appeared in the Czech media.	https://prg.ai/verejnost/
prg.ai newsletter	The prg.ai newsletter delivers curated news, insightful analyses, and updates on key AI projects and events every few weeks. Perfect for professionals, researchers, journalists, and AI enthusiasts who want to follow trends and breakthroughs in the fast-evolving world of AI.	https://prg.ai/zurnal/
AI and Automation Courses by Czechitas	Czechitas offers a variety of courses that introduce participants to the fundamentals of artificial intelligence and automation. These programs are designed to build practical understanding and skills, helping individuals grasp key concepts and applications in the field. The courses cater to different experience levels,	https://www.czechitas.cz/katalog-kurzu

Title	Description	Link
	providing a structured learning path for anyone interested in AI and automation technologies.	
AI horizons	A series of discussions with experts from various fields, shedding light on the topic of artificial intelligence from twelve different perspectives. AI Horizons is organized by the nonprofit initiative AI dětem, TAH Centre, and Didaktikon.	https://www.youtube.com/watch?v=o6VrIVs7sfA&list=PLZ8y_mMiyBWOQo4ZpUmxNAzbrPXmD7aj
Safe and Proper Implementation of AI in Companies	A practical guide that walks you through the first steps of implementing AI, ensuring you do so safely, ethically, and effectively.	https://www.barborabrabcova.cz/prirucka-zavadeni-ai/
Czech national AI platform	The best of the Czech AI scene in one place. The website www.cnaip.cz features an interactive map of the Czech AI ecosystem, including a database of research groups and corporate AI providers. It also offers inspiring use cases showcasing successful collaborations across academia, industry, and the public sector.	www.cnaip.cz
10 types of prototyping	How you ask a question can matter more than what you're asking. A well-crafted prompt can significantly improve the quality of AI-generated output. This overview introduces 10 essential types of prompting and explains when and how to use each technique for the best possible results.	https://www.digiskills.cz/blog/10-typu-promptovani-jak-si-spravne-rict-o-pomoc-od-gen-ai
AI-TRANSformation-Academy	<p>The video series offers education on best technologies, practices and examples of best practices in artificial intelligence and machine learning.</p> <p>The Academy is performed in the form of discussions or lectures by Sara Polak with personalities such as Pavel Kordík, Pavel Burget, Jan Šedivý, Ondřej Beránek or Stanislav Kuznetsov, who present key technologies and approaches tested within the EDIH CTU services.</p>	https://www.edihctu.eu/sluzby/ai-transformation-akademie/
Dny AI 2024: AI 4 ALL Prague (13 videos)	AI 4 All was a public event dedicated to making artificial intelligence accessible to everyone. Through lectures, panel discussions, and interactive sessions, visitors explored how AI is	

	<p>shaping our everyday lives — from education and healthcare to ethics, creativity, and beyond. The event aimed to spark curiosity, encourage dialogue, and highlight both the opportunities and challenges AI brings to society.</p> <p>Here are a few video recordings captured throughout the event:</p>	
AI Made Understandable part I.	<p>Can AI help in healthcare, or how does it come into conflict with the law? How is AI perceived in the Czech Republic? What opportunities and challenges can AI bring? The event took place as part of AI Days 2024 (www.dny.ai).</p>	<p>https://www.youtube.com/watch?v=1q3cHcEu6M</p>
AI Made Understandable part II.	<p>A recording of talks exploring how artificial intelligence connects with the real world. This session focuses on the intersection of innovation, regulation, and AI, as well as the use of AI in radio and audio production. The event was part of AI Days 2024 (www.dny.ai).</p>	<p>https://www.youtube.com/watch?v=YI9Zcn2VxKg</p>
AI Made Understandable part III.	<p>A recording of lectures on the role of artificial intelligence across various fields: theology, law, and a brief story of AI's evolution—from the first information-processing machines to today's advanced virtual assistants. The event was part of AI Days 2024 (www.dny.ai).</p>	<p>https://www.youtube.com/watch?v=zfZvCOVLI PQ</p>
Žárovky AI	<p>A special edition of the popular science lecture series <i>Žárovky</i> took participants into the world of science and innovation during AI Days 2024. What are the current challenges in AI safety? How do AI Safety Institutes work and what do they focus on? And how can we defend against adversarial attacks? Three young talents from different fields presented the possibilities and challenges that AI may bring.</p>	<p>https://www.youtube.com/watch?v=pO-UYuwj0Rw</p>
Data, Robots, and Cows – AI in the World of Farmers	<p>Thousands of farmers around the world are using modern, data-driven technologies powered by AI. Don't believe it? Come and find out how AI-equipped robots are helping improve cow milking, ensure proper feeding, and maintain the health and well-being of dairy cows. (Jan Bím, Datamole)</p>	<p>https://www.youtube.com/watch?v=V4eEwc6Zqlk&</p>
Music and Technology – Using AI to Protect Copyrights	<p>Step into the transformative world of artificial intelligence in music — from enhancing creativity to tackling copyright challenges. As pioneers in audio fingerprinting, we explore the ethics of AI-generated music, the demands of copyright protection, and the role of Pex in making sure creators get what they rightfully deserve.</p>	<p>https://www.youtube.com/watch?v=LCitKkaVL oM</p>
Quality Data as a Necessary Prerequisite for Artificial Intelligence	<p>Today, AI often steals the spotlight, while data gets less attention. However, without quality data, AI is useless. Benedikt Kotmel (OICT) explains the role of artificial intelligence in data processing within Prague's Golemio data</p>	<p>https://www.youtube.com/watch?v=yi9piC1JF mQ&</p>

	platform and discusses how data and processes will continue to limit us for some time.	
How to Gain an AI Colleague Instead of a Competitor	What exactly is artificial intelligence? We'll show you plenty of examples of where you can find it. But once you understand what AI can do and the principles behind it, you'll be able to use AI tools effectively both at work and in your free time. With years of experience, we're happy to share our knowledge. (Jiří Vrobel, The Mama AI)	https://www.youtube.com/watch?v=FdubPv_kl4&
Terminal with an AI Digital Avatar	Combining artificial intelligence with human abilities as a receptionist, assistant, and guide enables companies and institutions to provide their visitors with information quickly and efficiently. In this lecture, you'll learn how this integration can be used and where it finds its applications. (Mirek Páchl, aReception)	https://www.youtube.com/watch?v=kfSWHkfjTgs
Artificial Intelligence – The Collaboration of the Future	In today's rapidly evolving world, artificial intelligence is more than just a technology; it reflects human behavior. Machines are learning to mimic our responses and integrate into our daily lives, opening up new possibilities but also presenting challenges for individuals. How can we collaborate effectively with these intelligent systems? What impact will this new form of collaboration have on us and our professional roles? (Michal Kolomazník)	https://www.youtube.com/watch?v=peavFi1ISNg
Dialogue with AI	The most natural form of communication is human dialogue. But dialogue with artificial intelligence is still out of reach. Why? It's simple — we're just not there yet. Learn more from experts in natural language processing.	https://www.youtube.com/watch?v=MK-7HTiS9k0
Artificial Intelligence in the Development of Self-Driving Cars	While today's commercial aircraft use about 17 million lines of code, modern cars have over 70 million. To ensure the safety and effectiveness of their functions, they undergo very thorough system testing. This includes collecting vast amounts of data from roads and test tracks, processing and managing this data. What stage is self-driving car development currently at, and what role does artificial intelligence play in it?	https://www.youtube.com/watch?v=JAp5FREpQM0
Next-Generation Robots in Financial Services – Opportunities and Threats	Artificial intelligence is becoming an integral part of everyday life for all of us. Where can we encounter AI-powered robots with the highest levels of autonomy so far? In the world of finance, they are undoubtedly valuable helpers—but what does their darker side look like? (Jakub Zaňka, DataSantics)	https://www.youtube.com/watch?v=W23FdULIaVA

AI 4 Government	<p>Recording of an event aimed at presenting interesting examples of the use of AI in public administration.</p> <p>The possibilities and procedures of putting AI into practice, inspiration from abroad, possible risks and limitations, training offer were presented.</p>	<p>In November 2023</p>
AI 4 Business	<p>A record of a conference focused on substantive and practical formats on introducing AI into business processes, products and services. AI 4 Business is for innovation and performance managers, business owners, strategy consultants and others who need to get proven recommendations from experts and learn from the open sharing of experiences from companies in different segments.</p> <p>The recording is from two different sessions:</p> <ol style="list-style-type: none"> 1) Implementing AI from Vision to Scale that focuses on the patterns of successful AI project implementation 2) Mastering Generative AI from Tools to Law showcases several custom-built enterprise solutions in addition to beneficial tools ""on the cheap"" and provides essential recommendations and legal insights for effective and safe implementation of generative AI in companies. 	<p>In November 2023</p>
Beyond the Buzz - AI in Adult Education	<p>EPALE Resource Kit Artificial Intelligence is Transforming Education, but Are We Asking the Right Questions?</p> <p>New EPALE publication examines AI from a human perspective. It doesn't focus on the hype but explores what artificial intelligence truly means for adult education and professional development.</p>	<p>https://epale.ec.europa.eu/cs/blog/sada-zdroju-epale-beyond-buzz-ai-ve-vzdelavani-dospelych</p>
AI Ethics	<p>A series of news reports and expert interviews exploring key issues surrounding artificial intelligence. The program examines AI's ability to distinguish right from wrong, concerns about a future where technology replaces parts of human labour, and the pressing question of who is ultimately responsible for the actions of the AI system (Česká televize).</p>	<p>https://edu.ceskatelevize.cz/namet/etika-ai</p>
EU AI & GDPR: Key Trends and Insights	<p>As artificial intelligence rapidly transforms the business landscape, aligning with GDPR and emerging EU regulations has become essential. This ongoing update series offers a clear</p>	<p>https://www.dentons.com/en/insights/newsletters/eu-ai-and-gdpr-key-trends-and-insights</p>

<p>from Our Monthly Updates</p>	<p>overview of the latest developments in AI regulation, data protection, and compliance. Covering everything from enforcement actions to new governance frameworks, it helps organizations navigate legal risks and stay ahead in an evolving regulatory environment.</p>	
<p>Digital AI & AI Courses</p>	<p>These courses are designed for HR professionals, recruiters, and managers who want to integrate digital tools and artificial intelligence into their daily work. Whether you're a beginner or already exploring AI in HR, you'll learn how to use tools like ChatGPT, Microsoft Copilot, and others to streamline recruitment, onboarding, communication, and training. The program includes live workshops, online sessions, and access to a library of prompts, templates, tutorials, and post-course support. Ideal for anyone looking to future-proof their HR skills in a digital world.</p>	<p>https://www.digitalnhr.cz/courses</p>



3. Conclusion

This deliverable provides a structured, user-friendly catalogue of artificial-intelligence learning resources, ranging from introductory materials to advanced and sector-specific content. Each item includes a short description and a direct link, allowing readers to identify relevant materials quickly. The full set is also available on the EDIH CTU website to support straightforward access.

The document is designed for a broad audience—students, educators, practitioners, SMEs and public-sector staff—who need trusted guidance through a rapidly growing body of AI content. By centralising diverse resources in one place, it simplifies discovery and helps learners plan their development in a coherent manner.

This is an updated version of the original deliverable, reflecting new materials and the inclusion of a dedicated abbreviations list. The update history and approvals ensure traceability and quality control within the project's governance.

D4.1 fulfils its purpose as a practical signpost to credible AI education. It aligns with EDIH CTU's mission to strengthen digital skills and the uptake of AI across the Czech ecosystem by making relevant learning opportunities easier to find and use. Continued periodic updates keep the catalogue current and valuable for learners and organisations adopting AI.

