Mednarodna fakulteta
za družbene in poslovne študije
International School
for Social and Business Studies
Celje · Slovenia · Europe

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UČNI NAČRT / COURSE SYLLABUS

Predmet / Course	**Umetna inteligenca (UI) v poslovanju / Artifical Intelligence (AI) in Business**
Šifra predmeta / Course Code	B13TPI-TPI6-PSD
Nosilec predmeta / Course Coordinator	*Dr. Jure Stojan (*v postopku izvolitve v naziv)
Vrsta predmeta / Type of the course	izbirni/elective
Jezik / Language - **Vaje / Tutorials** - **Predavanja / Lecture**	Slovenski / Slovene, angleški / English Slovenski / Slovene, angleški / English
Študijski program / Programme	Poslovanje v sodobni družbi (1. stopnja) / Business in Contemporary Society (1st Cycle)
Letnik / Year	3.letnik/3rd year
Pogoji za vključitev / Requirements	/

Predavanja **Lectures**	**Vaje** **Tutorials**	**Druge oblike študija** **Other Type of Study**	**Samostojno delo** **Individual work**	**Ure dela** **Work hours**	**ECTS**
20	40	0	90	150	6

Vsebina / Content:

1. Uvod v umetno inteligenco (kratek pregled zgodovine razvoja UI, pregled glavnih vrst kot so strojno učenje, nevronske mreže, veliki jezikovni modeli) 2. Razumevanje UI skoz metafore (koncept »stohastičnih papig«, »kačje olje« v obljubah promotorjev UI) 3. UI proti tradicionalnim modelom (kdaj, če, so preprosti statistični modeli boljši od kompleksnih modelom strojnega učenja) 4. Poglobljena analiza velikih jezikovnih modelov (oblikovanje učinkovitih navodil, razumevanje rezultatov glede na modele) 5. Generativni modeli v UI (uvod v generativno-nasprotniške mreže, oblikovanje navodil za ilustracije, generirane z UI) 6. Omejitve in halucinacije UI (prepoznavanje in zmanjševanje pristranskosti UI, razumevanje, zakaj UI dela napake) 7. Treniranje modelov UI (modeli UI, trenirani na lastnih ali na splošnih podatkih, praktična uporaba v poslovanju) 8. Človeške in družbene posledice (poslovne priložnosti, varovanje podatkov, vpliv UI na delovna mesta, eskistencialna tveganja)	1. Introduction to Artificial Intelligence (a brief history of AI development, overview of main types such as machine learning, neural networks, large language models) 2. Understanding AI through metaphors (the concept of “stochastic parrots”, “snake oil” in the promises of AI promoters) 3. AI vs traditional models (when, if ever, are simple statistical models better than complex machine learning models) 4. In-depth analysis of large language models (crafting effective prompts, understanding results based on models) 5. Generative models in AI (introduction to generative adversarial networks, crafting prompts for AI-generated illustrations) 6. Limitations and hallucinations of AI (recognizing and reducing AI bias, understanding why AI makes mistakes) 7. Training AI models (custom-traineds and off-the-shelf AI models, practical application in business) 8. Human and societal implications (business opportunities, data protection, impact of AI on jobs, existential risks)

Splošne kompetence / General Competencies:

Študent bo pridobil znanje in spretnosti na naslednjih splošnih vsebinskih področjih: **SPL1:** Delo s podatki in informacijami; **SPL2:** Osnovne računalniške spretnosti; **SPL8:** Spretnosti kritičnega mišljenja; **SPL9:** Ustvarjanje novih zamisli (ustvarjalnost); **SPL13:** Spretnosti pisne komunikacije.	*Student will acquire knowledge and skills in the following general areas:* **SPL1:** Work with data and information; **SPL2:** Basic computer skills; **SPL8:** Critical thinking; **SPL9:** Creativity; **SPL13:** Written communication skills.

Predmetno specifične kompetence / Course Specific Competencies:

Študent bo pridobil znanje in spretnosti na naslednjih specifičnih vsebinskih področjih:	*Student will acquire knowledge and skills in the following specific areas:*
PSP9: Vidik etike na vsebinskem področju predmeta; **PSP12:** Informacijski sistemi in programska oprema na vsebinskem področju predmeta; **PSP13:** Tehnika in tehnologija na vsebinskem področju predmeta; **PSP16:** Raziskovalna metodologija na vsebinskem področju predmeta; **PSP18:** Splošna razgledanost na vsebinskem področju predmeta.	**PSP9:** Principles of ethics; **PSP12:** Information systems and software in the fields of the course; **PSP13:** Egineering and technology in the fields of the course; **PSP16:** Research methodology in the fields of the course; **PSP18:** General overview of the course content area.

Predvideni študijski izidi / Intended Learning Outcomes:

Študent bo dosegel naslednje študijske izide:	*Student will achieve the following learning outcomes:*
1. Kritično uporablja različne modele UI in prepozna, kateri so ustrezni za različne naloge. 2. Vrednoti izhode modelov UI in razume osnovne mehanizme, kako so ti rezultati nastali. 3. Pozna razvojne faze UI in razlikuje med glavnimi vrstami modelov in tehnologij UI. 4. Oblikuje učinkovite navodila za z UI ustvarjenje ilustracije in besedil. 5. Razume družbene in gospodarske posledice UI, vključno s poslovnimi priložnostmi in negativnimi vidiki kot so izguba delovnih mest in eksistencialna tveganja tehnologije. 6. Ločuje med končnimi in prilagojenimi modeli, prepoznavava scenarije, kjer je vsak primeren. 7. Prepoznava omejitve UI kot so halucinacije in pristranski rezultati.	1. Critically uses various AI models and recognizes which are suitable for different tasks. 2. Evaluates the outputs of AI models and understands the basic mechanisms by which these results were produced. 3. Knows the development phases of AI and distinguishes between the main types of models and AI technologies. 4. Designs effective instructions for creating illustrations and texts with AI. 5. Understands the social and economic consequences of AI, including business opportunities and negative aspects such as job loss and the existential risks of technology. 6. Differentiates between final models and customized models, recognizing scenarios where each is appropriate. 7. Recognizes limitations of AI such as hallucinations and biased results.

Oblike in metode poučevanja in učenja / Types and Methods of Teaching and Learning

Oblike dela ***Types of Teaching and Learning***	Frontalna oblika poučevanja; Delo v manjših skupinah; Samostojno delo študenta Frontal teaching; Work in smaller groups or pairs; Independent student work
Metode dela ***Teaching and Learning Methods***	Razlaga; Razgovor/diskusija/debata; Praktično delo Explanation; Conversation/discussion/debate; Practical Work

Načini ocenjevanja v % / Types of Student Assessment

Sprotno ustno ocenjevanje / Oral Assessment	0
Sprotno pisno ocenjevanje / Written Assessment /	20
Daljši pisni izdelek /Longer written casework[1]	20
Javni nastop s predstavitvijo rezultatov / Presentations[2]	30
Končni pisni izpit / Final written examination/	10
Končni ustni izpit / Final oral examination	0
Udeležba in sodelovanje / Participation and cooperation	20

[1] Seminarska ali projektna naloga, raziskovalna naloga ipd.
[2] Plakat, naloga, prispevek

Lestvica ocenjevanja / Grading scale	

Temeljna literatura / Literature:

1. Naomi S. Baron (2023). *Who Wrote This? How AI and the Lure of Efficiency Threaten Human Writing.* Stanford, CA: Stanford University Press.
2. Anthony Elliott (2022). *Making Sense of AI: Our Algorithmic World.* Cambridge: Polity.
3. Guy Hart-Davis (2023). *Killer ChatGPT Prompts: Harness the Power of AI for Success and Profit.* Hoboken, NJ: Wiley.
4. Hala Nelson (2023). *Essential Math for AI: Next-Level Mathematics for Efficient and Successful AI Systems.* Sebastopol, CA: O'Reilly Media.
5. Haroon Sheikh, Corien Prins, Erik Schrijvers, eds. (2023). *Mission AI: The New System Technology.* Cham: Springer.

Reference nosilca / Lecturer's references:

Vodja raziskav in razvoja na projektih s sofinanciranjem EU:

Marketing Activity Monitor – MAM. Javni razpis Spodbude za zagon inovativnih podjetij v letu 2017 (P2).

MAM rBIA«. Javni razpis Spodbude za raziskovalno razvojne projekte (2020)

Spletna aplikacija za polavtomatsko ocenjevanje podnebnega tveganja MSP (ClimaTool). Javni razpis Spodbude za raziskovalno razvojne projekte (2022)

Izvirni znanstveni članki:

Lost archives and found voices: reconstructing the marketing history of medical marijuana in Austria-Hungary. *Journal of Historical Research in Marketing*, ahead-of-print, 2023. https://www.emerald.com/insight/content/doi/10.1108/JHRM-04-2023-0013/full/html

Gospodarjenje kranjskih zadrug pod svitlim cesarjem. *Dialogi*, letnik 58 (2022), št. 11–12, str. 86–102.

We had joy, we had fun, we had seasons in the sun: pandemic disruptions in economic seasonality. *The Visio Journal*, Vol. 5, 2020, 17–29.

Privatisation failure and failure to privatise: the Slovene example. *Economic Affairs*, Vol. 4, No. 2 (2014), 270–281.

Objavljeni znanstveni prispevek na konferenci:

Lost Archives and Found Voices: Reconstructing the Marketing History of Medical Marijuana in Austria-Hungary. V: *21st Biennial Conference on Historical Analysis & Research in Marketing (CHARM)*, Vol. 21 (2023), https://ojs.library.carleton.ca/index.php/pcharm/article/view/4334/3308

The selling power of lobbying: the alternative marketing toolkit of a 20th-century British cancer quack. V: *Proceedings of the 17th Biennial Conference on Historical Analysis and Research in Marketing (CHARM)*, Vol. 17 (2015), https://ojs.library.carleton.ca/index.php/pcharm/article/view/1463/1318

When Did the Market Grow Two Sides? Advertising and the Media Under Emperor Franz Joseph I. V: *Proceedings of the 19th Biennial Conference on Historical Analysis and Research in Marketing (CHARM).* Vol. 19 (2019), https://ojs.library.carleton.ca/index.php/pcharm/article/view/1974/1797

Traders in Nature: Marketing Natural Medicine in 20th-century Britain. V: *Proceedings of the 16th Biennial Conference on Historical Analysis and Research in Marketing (CHARM).* Vol. 16 (2013), https://ojs.library.carleton.ca/index.php/pcharm/article/view/1407/1265