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## FutureMinds Lab Initiative

### TERMS OF REFERENCE 81-24-25

**Title: External Trainer – Vocational Training in Artificial Intelligence: Reasoning, Agents, and Decision Systems**

**Location: Bosnia and Herzegovina**

**Level of Effort: 5 training days, 5 days of mentoring (spanning across 4-month period) and 2 preparation days**

**Reporting to: Project Manager, FutureMinds Lab Initiative**

**Type of Contract: Short-term Individual Contract**

#### 1. Background

Bosnia and Herzegovina continues to face significant challenges in aligning its workforce with the rapidly growing demands of the digital economy. Studies by the OECD and UNICEF indicate that the country struggles with low levels of digital skills among youth, limited access to modern infrastructure, and a persistent gap between education outputs and labor market needs. This digital gap is particularly evident among youth aged 19-29, who often lack opportunities for structured, market-relevant training that leads directly to employment in high-demand digital sectors.

To address this gap, the FutureMinds Lab Initiative – implemented by the University Sarajevo School of Science and Technology (SSST) within the Private Sector Development Initiative in BiH (EU4PSD), co-funded by the European Union and the German Federal Ministry for Economic Cooperation and Development (BMZ) – was launched with the aim of equipping young people (aged 19-29) with future-oriented digital, green, and entrepreneurial skills through a four-month vocational training program. FutureMinds Lab activities are implemented building upon earlier achievements and the University's participation in the Digital Innovation Hub its4health.

The program focuses on three high-demand specializations: Cloud Computing, Cyber Security and Artificial Intelligence (AI). These fields have been identified as priority areas for Bosnia and Herzegovina's digital transition, offering strong prospects for youth employability both domestically and internationally.

This Call for Proposals relates to the Artificial Intelligence component of the vocational training program, specifically focusing on Reasoning, Agents, and Decision Systems. Through a blend of theoretical and practical sessions, the component explores how AI systems go beyond pattern recognition to reasoning, planning, and autonomous decision-making. Participants will learn how to model goal-oriented agents that perceive their environment, plan actions, and make decisions under uncertainty, while integrating ethical and safety considerations. By strengthening participants' understanding of agentic systems, this training supports the development of a new generation of professionals equipped to design, evaluate, and implement intelligent automation in Bosnia and Herzegovina's growing innovation ecosystem.



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## 2. Objective

To engage an external Artificial Intelligence trainer with proven expertise in AI reasoning, agent systems, and decision-making frameworks, capable of designing and delivering a structured vocational training and mentoring program on Reasoning, Agents, and Decision Systems.

## 3. Key responsibilities

- Develop a detailed training curriculum and training materials (presentations, slides, exercises, and assignments) covering: principles of reasoning and decision-making under uncertainty; symbolic and probabilistic reasoning approaches (rule-based systems, Bayesian inference, constraint reasoning); planning and goal management: representing tasks, sequencing actions, and optimization; agentic AI frameworks: autonomous and semi-autonomous systems, multi-agent coordination, human-in-the-loop design; decision systems and applications in logistics, manufacturing, energy, and digital services; simulation and modelling of intelligent agents in realistic environments; ethical and governance aspects of autonomy, accountability, and safety in agentic AI.
- Deliver five (5) in-person training sessions in line with the approved curriculum, ensuring interactive and application-based learning.
- Facilitate mentoring sessions to help participants design and present small-scale agentic systems or decision workflows relevant to local industry challenges.
- Integrate responsible AI principles and risk-management frameworks aligned with the EU AI Act and ISO/IEC standards.
- Adapt training delivery to participants' varying levels of technical knowledge and problem-solving experience.
- Participate in coordination and progress-monitoring meetings with the Project Team.
- Submit a final report (max. 3 pages) summarizing the curriculum delivered, materials developed, participant progress, and recommendations for future improvement.

## 4. Deliverables

- **Training Curriculum – Structured curriculum with defined learning outcomes and training materials /2 days of preparation/** (First payment: 20%)
- **Training Delivery – Facilitation of 5 training days and 5 days of mentoring, total 10 days/** (Second payment: 50%)
- **Final Report – Summary of training delivered and recommendations** (Third payment: 30%)

## 5. Timeline for delivery

Deliverable	Due Date
Preparation of Training Curriculum and materials	November 2025
Training Delivery	December 2025 - March 2026



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### Deliverable

Final Report Submission

### Due Date

March 15, 2026

## 6. Qualifications

- Minimum 4 years of professional experience in applied Artificial Intelligence, automation, or decision-support systems.
- Proven involvement in developing or deploying agentic or reasoning-based AI systems (rule engines, planning systems, or multi-agent simulations).
- A strong understanding of AI reasoning paradigms, including symbolic reasoning, probabilistic reasoning, and hybrid (neuro-symbolic) approaches.
- Experience with real-world AI integration challenges such as autonomy control, explainability, governance, and safety assurance.
- Familiarity with ethical and regulatory frameworks for AI (e.g., EU AI Act, ISO/IEC standards).
- Demonstrated ability to communicate complex technical concepts clearly and accessibly across interdisciplinary audiences.
- Ability to work with youth (aged 19-29) of mixed skill levels.
- Excellent communication and presentation skills.
- Fluency in the local language; working proficiency in English.

## 7. Application requirements

Applicants must submit:

- CV detailing relevant experience
- Short motivation letter
- Short outline of proposed training approach (one page) including methodology, structure, tools to be used and learning outcomes
- Financial offer (daily fee rate).

## 8. Selection criteria

Criterion	Weight
Professional experience in Artificial Intelligence and agentic/decision-making systems	40%
Quality of proposed training approach	20%
Relevance to target group (youth, entry-level)	20%
Financial offer	20%



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## 9. Language of the Assignment

Training will be conducted in the local language, while the final report must be submitted in English.

## 10. Submission Deadline

All interested candidates are to submit their bids with all supporting documents no later than November 23, 2025, 23:59. All bids are to be submitted electronically to the following email address: [info@ssst.edu.ba](mailto:info@ssst.edu.ba), with the subject line: *81-24-25 FML External Trainer – Artificial Intelligence: Reasoning, Agents and Decision Systems*. Any inquiries regarding the opportunity may be directed to the same address and subject line.



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## Financial Proposal Form – 81-24-25

Name of Bidder:	[Insert Name of Bidder]	Date:	Select date
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Bidders are required to prepare their financial proposals following the below format and submit it with the technical offer. Any financial information provided in the technical proposal shall lead to the Bidder's disqualification.

The Financial Proposal should align with the requirements in the Terms of Reference and the Bidder's Technical Proposal.

**Currency of the proposal: BAM**

**Table 1: Summary of Overall Prices**

	Amount(s)
<b>Professional Fees</b> (from Table 2)	
<b>Other Costs</b> (from Table 3)	
<b>Total Amount of Financial Proposal</b>	

**Table 2: Breakdown of Professional Fees**

Name	Position	Fee Rate <i>A</i>	No. of Days/months/ hours <i>B</i>	Total Amount <i>C=AxB</i>
In-Country				
Home Based				
<b>Subtotal Professional Fees:</b>				

**Table 3: Breakdown of Other Costs**

Description	UOM	Quantity	Unit Price	Total Amount
Local transportation costs	Lump Sum			
Out-of-Pocket Expenses				
Other Costs: (please specify)				
<b>Subtotal Other Costs:</b>				



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**Table 4: Breakdown of Price per Deliverable/Activity**

<b>Deliverable/ Activity description</b>	<b>Time (person days)</b>	<b>Professional Fees</b>	<b>Other Costs</b>	<b>Total</b>
Deliverable 1				
Deliverable 2				
Deliverable 3				
.....				

**Signature of authorized person:**



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## Inicijativa FutureMinds Lab

### PROJEKTNI ZADATAK 81-24-25

**Naziv pozicije: Spoljni trener – stručno osposobljavanje iz vještačke inteligencije: Zaključivanje, agenti i sistemi odlučivanja**

**Lokacija: Bosna i Hercegovina**

**Angažman: 5 dana obuke, 5 dana mentorisanja (u periodu od 4 mjeseca) i 2 dana pripreme**

**Izvršavanje: Projektni menadžer, Inicijativa FutureMinds Lab**

**Vrsta ugovora: Kratkoročni angažman pojedinačnog spoljnog trenera**

#### 1. Kontekst

Bosna i Hercegovina se i dalje suočava sa značajnim izazovima u usklađivanju radne snage sa ubrzanim zahtjevima digitalne ekonomije. Prema izvještajima OECD-a i UNICEF-a, mladi u zemlji imaju nizak nivo digitalnih vještina, ograničen pristup savremenoj infrastrukturi i jaz između obrazovnih programa i potreba tržišta rada. Ovaj digitalni jaz posebno je izražen kod mladih uzrasta 19-29 godina, koji često nemaju priliku za strukturirane, tržišno relevantne obuke koje direktno vode do zaposlenja u sektorima s visokom potražnjom.

Kako bi se odgovorilo na ovaj izazov, pokrenuta je FutureMinds Lab inicijativa – koju implementira Univerzitet Sarajevo School of Science and Technology (SSST) u okviru Inicijative za razvoj privatnog sektora u BiH (EU4PSD), sufinansirane od strane Evropske unije i Njemačkog saveznog ministarstva za ekonomsku saradnju i razvoj (BMZ) – s ciljem da se mladim osobama (uzrasta 19 – 29 godina) obezbijede budućnosti orijentisane digitalne, „zelene“ i preduzetničke vještine kroz četveromjesečni program stručne obuke. Aktivnosti FutureMinds Lab-a nadovezuju se na ranije rezultate i učešće Univerziteta u Digitalnom inovacijskom habu its4health.

Program je fokusiran na tri oblasti sa visokom potražnjom Cloud Computing, Cyber Security i vještačka inteligencija (AI). Ove oblasti su prepoznate kao prioritetne za digitalnu tranziciju Bosne i Hercegovine, sa snažnim potencijalom za zapošljavanje mladih na domaćem i na međunarodnom tržištu.

Ovaj javni poziv odnosi se na komponentu vještačke inteligencije, s posebnim fokusom na zaključivanje, agente i sisteme odlučivanja. Kroz spoj teorijskih i praktičnih sesija, komponenta istražuje kako AI sistemi idu dalje od prepoznavanja obrazaca ka zaključivanju, planiranju i autonomnom donošenju odluka. Polaznici će naučiti kako modelirati ciljno usmjerene agente koji opažaju okruženje, planiraju akcije i donose odluke pod neizvjesnošću, uz integraciju etičkih i sigurnosnih aspekata. Jačanjem razumijevanja agentskih (agentič) sistema, ova obuka podržava razvoj nove generacije profesionalaca spremnih da dizajniraju, procjenjuju i implementiraju inteligentnu automatizaciju u rastućem inovacionom ekosistemu Bosne i Hercegovine.

#### 2. Cilj angažmana

Angažovati spoljnog trenera iz oblasti vještačke inteligencije, sa dokazanim iskustvom u AI zaključivanju, agentskim sistemima i okvirima za donošenje odluka, koji je sposoban da osmisli i isporuči strukturiran program stručne obuke i mentorstva na temu Zaključivanje, agenti i sistemi odlučivanja.



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### 3. Ključne odgovornosti

- Razviti detaljan kurikulum obuke i materijale (prezentacije, slideovi, vježbe, zadaci) pokrivajući: principe zaključivanja i donošenja odluka pod neizvjesnošću; simboličke pristupe zaključivanju i zaključivanje zasnovano na vjerovatnoći (sistemi zasnovani na pravilima, Bajesovska inferencija, zaključivanje zasnovano na ograničenjima); planiranje i upravljanje ciljevima: reprezentacija zadataka, sekvenciranje akcija i optimizacija; agentski (agentic) AI okviri: autonomni i poluautonomni sistemi, koordinacija više agenata, dizajn sa čovjekom u petlji (human-in-the-loop); sistemi odlučivanja i primjene u logistici, proizvodnji, energetici i digitalnim servisima; simulaciju i modeliranje inteligentnih agenata u realističnim okruženjima; etičke i upravljačke aspekte autonomije, odgovornosti i sigurnosti u agentskom AI-ju.
- Održati pet (5) dana obuke uživo u skladu s odobrenim kurikulumom, uz interaktivno i na primjeni zasnovano učenje.
- Voditi mentorske sesije kako bi polaznici osmislili i prezentirali manje agentske sisteme ili tokove odlučivanja relevantne za izazove lokalne industrije.
- Integrisati principe odgovorne AI prakse i okvire upravljanja rizicima usklađene s EU AI Act i ISO/IEC standardima.
- Prilagoditi obuku polaznicima različitih nivoa tehničkog znanja i iskustva u rješavanju problema.
- Učestvovati u sastancima za praćenje napretka s projektnim timom.
- Dostaviti završni izvještaj (maks. 3 stranice) sa sažetkom sadržaja realizovanog kurikuluma, napretka polaznika i preporukama.

### 4. Rezultati angažmana (Deliverables)

- **Kurikulum obuke – strukturiran plan obuke sa definisanim ishodima učenja /2 dana pripreme/** (prva uplata – 20%)
- **Realizacija obuke – 5 dana obuke i 5 dana mentorisanja /ukupno 10 dana/** (druga uplata – 50%)
- **Završni izvještaj – sažetak obuke i preporuke** (treća uplata – 30%)

### 5. Vremenski okvir isporuke

Rezultati angažmana	Rok za isporuku
Priprema kurikuluma i materijala	novembar 2025.
Realizacija obuke	decembar 2025. – mart 2026.
Predaja završnog izvještaja	15. mart 2026.

### 6. Kvalifikacije

- Minimalno 4 godine profesionalnog iskustva u primijenjenoj vještačkoj inteligenciji, automatizaciji ili sistemima za podršku odlučivanju.
- Dokazano učešće u razvoju ili implementaciji agentskih ili na zaključivanju zasnovanih AI sistema (pravila/engines, planerski sistemi ili višeagentske simulacije).



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- Odlično razumijevanje paradigmi AI zaključivanja, uključujući simboličko, probabilističko i hibridno (neuro-simboličko) zaključivanje.
- Iskustvo s izazovima integracije u praksi: upravljanje autonomijom, objašnjivost, upravljanje i osiguranje sigurnosti.
- Poznavanje etičkih i regulatornih okvira za AI (npr. EU AI Act, ISO/IEC standardi).
- Dokazana sposobnost da kompleksne tehničke koncepte komunicira jasno i razumljivo interdisciplinarnim publikama.
- Sposobnost rada sa mladima (19-29) koji imaju različite nivoe znanja.
- Odlične komunikacijske i prezentacijske vještine.
- Tečno poznavanje lokalnog jezika; sposobnost korištenja engleskog jezika u profesionalnom kontekstu.

## 7. Potrebna dokumentacija za prijavu

- CV sa relevantnim iskustvom
- Kratko motivaciono pismo
- Kratki pregled predloženog pristupa obuci (jedna stranica) uključujući metodologiju, strukturu, alate koji će se koristiti i ishode učenja
- Finansijska ponuda (cijena po danu).

## 8. Kriteriji za odabir

Kriterij	Težina
Profesionalno iskustvo u AI i agentskim/sistemima odlučivanja	40%
Kvalitet predloženog pristupa obuci	20%
Relevantnost za ciljnu grupu (mladi, početnici)	20%
Finansijska ponuda	20%

## 9. Jezik angažmana

Obuka će se izvoditi na lokalnom jeziku, dok se završni izvještaj predaje na engleskom.

## 10. Rok za prijavu

Svi zainteresirani kandidati dužni su poslati svoje prijave sa pratećom dokumentacijom najkasnije do **23. novembra 2025. godine do 23:59 sati**. Prijave se dostavljaju isključivo elektronskim putem na slijedeću e-mail adresu: [info@ssst.edu.ba](mailto:info@ssst.edu.ba), uz napomenu u predmetu e-maila: *81-24-25 FML External Trainer – Artificial Intelligence: Reasoning, Agents and Decision Systems*. Pitanja i pojašnjenja u vezi sa pozivom mogu se poslati na istu adresu i uz isti predmet emaila.



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## Forma finansijske ponude – 81-24-25

Ime ponuđača	[ime ponuđača]	Datum:	Odaberi datum
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Ponuđači su obavezni pripremiti svoje finansijske prijedloge prema dole navedenom formatu i dostaviti ih zajedno sa tehničkom ponudom. Svaka finansijska informacija koja bude pružena u tehničkoj ponudi rezultat će diskvalifikacijom ponuđača.

Finansijski prijedlog treba biti usklađen sa zahtjevima iz Projektnog zadatka i tehničkom ponudom ponuđača.

**Valuta ponude: KM**

**Tabela 1: Sažetak ukupnih cijena**

	Iznos(i)
Profesionalne naknade (iz Tabele 2)	
Ostali troškovi (iz Tabele 3)	
<b>Ukupni iznos finansijskog prijedloga</b>	

**Tabela 2: Raspodjela profesionalnih naknada**

Ime	Pozicija	Tarifa <i>A</i>	Broj dana/mjeseci/sati <i>B</i>	Ukupni iznos $C=A \times B$
U zemlji				
Kod kuće				
<b>Podzbir profesionalnih naknada:</b>				

**Tabela 3: Raspodjela drugih troškova**

Opis	Jedinica mjere	Količina	Jedinična cijena	Ukupni iznos
Troškovi lokalnog transporta	Paušalni iznos			
Troškovi "iz džepa"				
Ostali troškovi: (molimo navedite)				
<b>Podzbir drugih troškova:</b>				



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**Tabela 4: Raspodjela cijene po isporuci/aktivnosti**

Isporuka/Opis aktivnosti	Vrijeme (osoba/dani)	Profesionalne naknade	Ostali troškovi	Ukupno
Isporuka 1				
Isporuka 2				
Isporuka 3				
.....				

**Potpis ovlaštene osobe:**