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Future Minds Lab Initiative

TERMS OF REFERENCE 81-20-25-1

Repeated Call

Title: External Trainer – Vocational Training in Cloud Computing: Data Engineering in the Cloud

Location: Bosnia and Herzegovina

Level of Effort: 5 training days, 5 days of mentoring (spanning across 6 month-period) and 2 preparation days

Reporting to: Project Manager, Future Minds 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 Future Minds Lab Initiative – implemented by the University Sarajevo School of Science and Technology (SSST) under the SEDEP program and supported by GIZ – was launched with the aim of equipping young people (aged 19-29) with future-oriented digital, green, and entrepreneurial skills through a six-month vocational training program.

The program focuses on three high-demand specializations: Game Design, Cyber Security, and Cloud Computing. 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 Cloud Computing component, focusing on Data Engineering in the Cloud. The module is designed to give participants a practical introduction to data pipelines and cloud-based data management, preparing them to apply cloud-based data engineering practices in real-world contexts.

2. Objective

To engage an external cloud computing trainer with proven expertise in data engineering and cloud-based data infrastructures to deliver structured training and mentoring sessions. The training will provide participants with both theoretical knowledge and hands-on experience in building ETL pipelines, managing scalable data warehouses, and preparing datasets for analytics and machine learning.



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3. Key responsibilities

- Develop a detailed training curriculum and materials (presentations, slides, exercises, assignments) covering cloud-based data engineering, ETL pipelines, and data transformation workflows.
- Introduce participants to tools and services such as AWS Glue, Amazon Redshift, Apache Spark, dbt, and Dagster.
- Deliver in-person training sessions.
- Facilitate mentoring to guide participants through the development of a practical data engineering pipeline for educational concept extraction.
- Support participants in applying best practices for data security, scalability, and governance.
- Adapt teaching to the varying skill levels of participants and provide mentoring and guidance during the training.
- Participate in progress monitoring meetings with the Project Team.
- Submit a final report (max. 3 pages) summarizing the curriculum, content delivered, participant progress, and recommendations.

4. Deliverables

- **Training Curriculum – Structured curriculum with defined learning outcomes /2 days of preparation/** (First payment: 20%)
- **Module 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	September 2025
Module Delivery	October 2025 - March 2026
Final Report Submission	March 31, 2026

6. Qualifications

- Minimum 3 years of professional experience in cloud computing, cloud-based data infrastructures, data engineering or related fields.
- Hands-on expertise in AWS data services (Glue, Redshift, S3) and open-source tools (Spark, dbt, Dagster).
- Proven experience in designing and deploying scalable data pipelines and warehouses.
- Ability to work with youth (aged 19-29) with mixed skill levels



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- 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 cloud-based data engineering	40%
Quality of proposed training approach	20%
Relevance to target group (youth, entry-level)	20%
Financial offer	20%

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 September 15, 2025, 23:59. All bids are to be submitted electronically to the following email address: info@ssst.edu.ba, with the subject line: *81-20-25-1 FML External Trainer – Cloud Computing: Data Engineering in the Cloud. Repeated Call*. Any inquiries regarding the opportunity may be directed to the same address and subject line.



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Financial Proposal Form – 81-20-25-1

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)
Professional Fees (from Table 2)	
Other Costs (from Table 3)	
Total Amount of Financial Proposal	

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=A+B</i>
In-Country				
Home Based				
Subtotal Professional Fees:				

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)				
Subtotal Other Costs:				



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Table 4: Breakdown of Price per Deliverable/Activity

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

Signature of authorized person:



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Inicijativa Future Minds Lab

PROJEKTNİ ZADATAK 81-20-25-1

Ponovljeni poziv

Naziv pozicije: Spoljni trener – stručno osposobljavanje iz Cloud Computinga: inženjering podataka u cloudu

Lokacija: Bosna i Hercegovina

Angažman: 5 dana obuke, 5 dana mentorisanja (u periodu od 6 mjeseci) i 2 dana pripreme

Izvršavanje: Projektni menadžer, Inicijativa Future Minds 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 Future Minds Lab inicijativa – koju implementira Univerzitet Sarajevo School of Science and Technology (SSST) u okviru SEDEP programa i uz podršku GIZ-a. Cilj inicijative je da mladima (19-29 godina) pruži digitalne, zelene i preduzetničke vještine usmjerene ka budućnosti, kroz šestomjesečni program stručnog osposobljavanja.

Program je fokusiran na tri oblasti sa visokom potražnjom: Game Design, Cyber Security i Cloud Computing. 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 Cloud Computing unutar programa, s fokusom na inženjering podataka u cloudu. Modul daje praktičan uvod u izgradnju „data pipeline“-a i upravljanje podacima u cloud okruženju, pripremajući polaznike da primjenjuju cloud-based prakse inženjeringa podataka u realnim uslovima.

2. Cilj angažmana

Angažovati eksternog trenera iz oblasti cloud computinga, sa dokazanim iskustvom u inženjeringu podataka i cloud-based podatkovnim infrastrukturama, koji će realizovati strukturisanu obuku i mentorisanje. Obuka treba da polaznicima pruži teorijska znanja i praktično iskustvo u izgradnji ETL tokova, upravljanju skalabilnim „data warehouse“-ima i pripremi skupova podataka za analitiku i mašinsko učenje.

3. Ključne odgovornosti

- Razviti detaljan kurikulum obuke i materijale (prezentacije, slideovi, vježbe, zadaci) koji pokrivaju cloud-based inženjering podataka, ETL tokove i procese transformacije podataka.



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- Upoznati polaznike sa alatima i servisima kao što su AWS Glue, Amazon Redshift, Apache Spark, dbt i Dagster.
- Izvoditi obuku uživo.
- Mentorirati polaznike tokom izrade praktičnog „data engineering“ pipeline-a za ekstrakciju obrazovnih koncepata.
- Pružiti podršku polaznicima u primjeni dobrih praksi za sigurnost podataka, skalabilnost i upravljanje podacima.
- Prilagoditi podučavanje različitim nivoima znanja polaznika.
- Učestvovati u sastancima za praćenje napretka s projektnim timom.
- Dostaviti završni izvještaj (max 3 stranice) sa sažetkom sadržaja i 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 modula – 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	septembar 2025.
Realizacija obuke	oktobar 2025. – mart 2026.
Predaja završnog izvještaja	31. mart 2026.

6. Kvalifikacije

- Minimalno 3 godine profesionalnog iskustva u cloud computingu, cloud-based podatkovnim infrastrukturama, inženjeringu podataka ili srodnim oblastima.
- Dokazano iskustvo u AWS „data“ servisima (Glue, Redshift, S3) i open-source alatima (Spark, dbt, Dagster).
- Dokazano iskustvo u dizajniranju i implementaciji skalabilnih „data pipeline“-a i skadišta podata (engl. *data warehouse*).
- 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



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- 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 cloud-based inženjeringu podataka	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 **15. septembra 2025. godine do 23:59 sati**. Prijave se dostavljaju isključivo elektronskim putem na slijedeću e-mail adresu: info@ssst.edu.ba, uz napomenu u predmetu e-maila: *81-20-25-1 FML External Trainer – Cloud Computing: Data Engineering in the Cloud. Ponovljeni poziv*. 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 – 81-20-25-1

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)	
Ukupni iznos finansijskog prijedloga	

Tabela 2: Raspodjela profesionalnih naknada

Ime	Pozicija	Tarifa <i>A</i>	Broja dana/mjeseci/sati <i>B</i>	Ukupni iznos <i>C=A+B</i>
U zemlji				
Kod kuće				
Podzbir profesionalnih naknada:				

Tabela 3: Raspodjela drugih troškova

Opis	Mjera jedinice	Količina	Jedinična cijena	Ukupni iznos
Troškovi lokalnog transporta	Paušalni iznos			
Troškovi "iz džepa"				
Ostali troškovi: (molimo navedite)				
Podzbir drugih troškova:				



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Tabela 4: Raspodjela cijene po isporuci/aktivnosti

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

Potpis ovlaštene osobe: