UNIVERZITET U SARAJEVU -
ELEKTROTEHNIČKI FAKULTET
S a r a j e v o
Zmaja od Bosne bb

Na osnovu čl. 5. i 6. Odluke Vijeća Univerziteta u Sarajevu - Elektrotehničkog fakulteta o definiranju procedure realizacije naučnoistraživačkih seminara na trećem ciklusu studija – doktorskom studiju (broj: 01-503/21 od 01.02.2021. godine) i Odluke Vijeća Univerziteta u Sarajevu - Elektrotehničkog fakulteta (broj: 01-3344/25 od 01.09.2025. godine), Univerzitet u Sarajevu - Elektrotehnički fakultet, daje

O B A V I J E S T
o odbrani seminara

Studentica trećeg ciklusa studija - doktorskog studija, Mubina Kamberović, magistar elektrotehnike - diplomirani inženjer elektrotehnike, branit će Naučnoistraživački seminar 1.1. pod naslovom "AI-Assisted Programming Learning".

Seminar je izrađen u saradnji sa akademskom savjetnicom, dr.sc. Senkom Krivić, docenticom Univerziteta u Sarajevu - Elektrotehničkog fakulteta.

Odbrana seminara održat će se 12. septembra 2025. godine (petak), s početkom u 11:00 sati, u prostorijama Univerziteta u Sarajevu - Elektrotehničkog fakulteta (Sala BitLab, treći sprat).

Odbrana seminara je javna.

Obavijest o odbrani i sažetak seminara, oglašavaju se na oglasnim pločama i internet stranici Univerziteta u Sarajevu - Elektrotehničkog fakulteta.

Oglašeno:
Sarajevo, 03.09.2025. godine

Akademska savjetnica: Doc. dr. Senka Krivić
Studentica: Mubina Kamberović
magistar elektrotehnike – diplomirani inženjer elektrotehnike

Naziv naučnoistraživačkog seminara 1.1:

AI-Assisted Programming Learning
(Sažetak/Abstract)

As artificial intelligence (AI) tools become ubiquitous in computer science education, understanding their role in supporting the learning of programming has become a pressing research concern. This literature review synthesizes findings from 39 research papers to explore the current state of AI use in programming education. Our analysis reveals a wide range of AI-supported functionalities, from code generation and debugging assistance to personalized tutoring and feedback. However, despite the variety of applications, the underlying methods are not equally diverse, with most of them relying on Large Language Models (LLMs). LLMs offer extreme flexibility, but are prone to hallucinations despite efforts to minimize them, and their high operational costs limit their scalability, amplifying the inequity in access to high-quality educational tools. Other approaches are either powered by LLMs or still in the research phase, with little to no practical studies. Most importantly, current approaches do not incorporate any explainable methods, which are crucial in educational settings. Students generally respond positively to AI tools, appreciating their accessibility and usefulness, though concerns exist about over-reliance and lack of personalization. While short-term benefits, such as improved performance and reduced frustration, are frequently reported, the long-term impact on conceptual understanding remains underexplored. We highlight the need for more carefully designed, personalized educational AI tools and the importance of interaction-level analysis and longitudinal research to fully assess their teaching effectiveness.