

YEDITEPE UNIVERSITY
Department of Computer Engineering

SEMINAR

June 2, 2026 (Tuesday)

13:00 – 13:50

Faculty of Engineering (Room: A-412)

**FROM HISTORICAL DATA TO EXTERNAL SHOCKS:
AN AI-BASED FRAMEWORK FOR UNDERSTANDING
CRYPTOCURRENCY MARKET REACTIONS**

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Cryptocurrency markets are highly volatile and strongly influenced by historical price patterns, investor sentiment, political events, geopolitical conflicts, social media activity, and internal market shocks. This presentation introduces an AI-based framework that combines historical cryptocurrency data, sentiment analysis, deep learning models, and event study methodology to better understand market reactions.

The framework uses market indicators such as open, high, low, close, and volume, together with sentiment signals from tweets and financial news. RNN and LSTM models are applied to capture temporal patterns, while GRU and Transformer-based models are discussed as possible future extensions. The presentation also examines event-driven reactions, including geopolitical conflicts, the 2024 U.S. presidential election, the Terra/LUNA collapse, and the KEKIUS social media event. The main contribution is to present cryptocurrency prediction not as direct financial advice, but as a decision-support tool for understanding volatility, risk, and market behavior.

Biography

Haris Haxhimehmeti is a PhD Candidate in Computer Science at South East European University with research interests focused on artificial intelligence, machine learning, sentiment analysis, and financial market prediction. His work primarily explores the application of deep learning and statistical methodologies in cryptocurrency market analysis, including price forecasting, event study analysis, and volatility modeling. His recent research integrates artificial intelligence techniques with sentiment analysis and event-driven frameworks to investigate how political, geopolitical, and social media events influence cryptocurrency markets. In addition to academic research, he has experience in digital technologies, data analysis, and software-related projects, with a particular interest in combining computational methods with real-world financial applications. Since 2016, he works for Bottomline technologies as implementation consultant.