

You are invited to the 64th edition of the PRAGUE COMPUTER SCIENCE SEMINAR

FILIP DVOŘÁK

Agentic AI – where symbolic and subsymbolic modeling converges

The lecture will be followed by a discussion

**November 20, 2025
4:15pm**

**Auditorium KN:A-312,
FEL CTU, Karlovo nám. 13
Praha 2**

ABSTRACT

While subsymbolic modeling (machine learning, large language models) excels at capturing statistical patterns of the world from historical data, symbolic modeling (constraint satisfaction, SAT solving, planning, knowledge graphs) provides efficient reasoning on top of explicitly captured mechanics of the world with various levels of abstraction. The efficient interleaving of these two paradigms remains an open research challenge — one that underpins the next evolution of composite AI, neurosymbolic AI, and, in contemporary terms, agentic AI. In this talk, we provide an overview of the state of the agentic AI field, and we dive into the principles and techniques developed and deployed to production by Filuta AI across industries such as energy, logistics, automotive, dual-use, and digital entertainment.

ABOUT THE PRAGUE COMPUTER SCIENCE SEMINAR

The seminar takes place once a month on Thursdays at 4:15pm (except June to September, and December) alternately in the buildings of Faculty of Electrical Engineering, Czech Technical University in Prague, Karlovo nám. 13, Praha 2 and Faculty of Mathematics and Physics, Charles University, Malostranské nám. 25, Praha 1. Its program typically consists of a one-hour lecture followed by a discussion. The lecture is based on an (internationally) exceptional or remarkable achievement of the lecturer, presented in a way which is comprehensible and interesting to a broad computer science community. The lectures are in English.



Filip Dvořák is a Czech-American artificial intelligence expert and entrepreneur. He holds a doctorate in Artificial Intelligence from the Faculty of Mathematics and Physics at Charles University in Prague and conducted research at the University of Toronto, the Palo Alto Research Center (PARC), and LAAS-CNRS in France. He has worked as a researcher for Google, Microsoft, and SLB, and has been involved in several AI startups in the San Francisco Bay Area that led to successful acquisitions. In September 2022, he co-founded Filuta AI, a deep-tech company developing autonomous and composite AI systems that combine symbolic reasoning with machine learning to enable agentic intelligence.

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