Angelika Romanou

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Website ♦ Github ♦ Google Scholar

RESEARCH INTERESTS

My research focus lies on the evaluation of generative AI agents in multilingual and multimodal contexts. I am interested in testing the complex reasoning abilities of LLMs and modular deep-learning architectures.

Professional & Research Experience

09/2020 - Present PhD Candidate, EPFL - NLP lab, LSIR lab, Lausanne / Switzerland

- Research on complex reasoning & cross-lingual transfer in Large Language Models (LLMs).
- Teaching Assistant for <u>DIS</u> & <u>DB-Systems</u> & <u>Modern NLP</u> EPFL master courses.
- Supervisor for students' semester and master projects.

06/2019 - 08/2020 Machine Learning Research Scientist, EPFL - lsir.epfl.ch, Lausanne / Switzerland

- Research on sequence modeling and natural language processing.
- Software development for machine learning projects.

03/2018 – 06/2019 Machine Learning Software Engineer, Beat - thebeat.co, Athens / Greece

- Design, implement, and deploy Machine Learning features for Beat App or internal tools.
- Develop reliable and scalable services using micro-services architecture.

02/2017 – 03/2018 Big Data Software Engineer, Beat - thebeat.co, Athens / Greece

- Build data streaming pipelines in order to serve machine learning applications/services.
- Develop components that analyze, process, and react to operational feeds in near real-time, optimizing driver allocation, optimizing service pricing, and preventing fraudulent activities.
- Work with other engineering teams to translate complex models and algorithms into production-grade software systems.

03/2014 - 02/2017 Data Scientist, Intelen Inc - intelen.com, New York / USA, Athens / Greece

- Demand forecasting and energy grid optimization.
- Perform data-driven business consulting on clients.
- Research and development on data-oriented functionalities and services.

10/2013 - 03/2015 Lab & Research Assistant, ELTRUN lab (AUEB) - eltrun.gr, Greece

• Data processing and analysis on European and National projects.

EDUCATION

09/2020 - Present Ecole Polytechnique Fédérale de Lausanne (EPFL), Lausanne, Switzerland

• PhD degree: Computer Science

• Thesis direction: "Evaluation of Generative AI Agents in Multilingual and Multimodal Contexts"

09/2016 - 07/2018 Athens University of Economics and Business (AUEB), Athens, Greece

- MSc degree: Data Science (2-year degree, 78 ECTS)
- Thesis: "Named Entity Recognizer for the Greek Language using Deep Learning Architectures."

09/2010 - 07/2015 Athens University of Economics and Business (AUEB), Athens, Greece

- **BSc degree**: Department of Management Science and Technology (4-year degree, 240 ECTS)
 - o Grade: 8.04/10 "Very Good"
 - Major: Information Systems
- Thesis: "An Overview of Information Systems Architectures and their Impact on Strategic Management"

NOTABLE PUBLICATIONS

- INCLUDE: Evaluating Multilingual Language Understanding with Regional Knowledge (Sept. 2024) Romanou A, Foroutan N, Bosselut A, et al. ICLR 2025 (Under Submission)
- Meditron-70b: Scaling medical pretraining for large language models (Nov. 2023) Chen Z, Cano AH, Romanou A, Bosselut A, et al. arXiv preprint
- CRAB: Assessing the Strength of Causal Relationships Between Real-world Events (Jun. 2023) Romanou A, Montariol S, Paul D, Laugier L, Aberer K, Bosselut A, *EMNLP 2023*
- Multilingual Text Summarization on Financial Documents (Jun. 2022)
 Foroutan N, Romanou A, Massonnet S, Lebret R, Aberer K, FNS Workshop @LREC2022
- Interpreting Language Models Through Knowledge Graph Extraction (Dec. 2021) Swamy V, Romanou A, Jaggi M, eXplainable AI Workshop @NeurIPS2021
- SciLens News Platform: A System for Real-Time Evaluation of News Articles (Apr. 2020) Romanou A, Smeros P, Castillo C, Aberer K, VLDB2020
- more on my Google Scholar

RECENT INVITED TALKS

- Invited Talk at AMLD 2024, Lausanne / Switzerland (in-person)
- Causality Workshop at AAAI 2024, Vancouver / Canada (in-person)
- Poster presentation at EMNLP 2023, Singapore / Singapore (in-person)
- iNET Oxford Seminars (Nov 2023), Oxford / United Kingdom (in-person)

Programming Skills

- Languages: Python, Scala, SQL
- ML Frameworks: Pytorch, Tensorflow, Keras, HuggingFace, scikit-learn
- Big Data Frameworks: Apache Spark, Apache Flink, Apache Hive

Languages

• Greek (native), English (fluent), French (basic)