Nearchos Potamitis, MSc.

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✉ nearchospot@gmail.com   📞 0035796558067   🌐 Cypriot

Education

25 – 28	🔖	**Ph.D., Aarhus University** in Computer Science.
22 – 24	🔖	**M.Sc, Swiss Federal Institute of Technology, Lausanne** in Data Science. Thesis: Fleet of Agents: Coordinated Problem Solving with Large Language Models.
17 – 21	🔖	**B.Sc. Swiss Federal Institute of Technology, Lausanne** in Electrical Engineering. Project: Realisation of a tunable light source based on third-order nonlinear interaction in optical fibers.

Professional Experience

🔖 **Aarhus University,** Research assistant (Jan. 25 – Jul. 25).
- Focused on improving the reasoning ability and the cost-quality trade-off of Large Language Models (LLMs).
- As a first author, **two full papers** accepted to **ICML 2025**, and **EMNLP 2025**.
- Advisor: Prof. Akhil Arora.

🔖 **European Parliament,** Data science trainee, (Sep. 24 – Dec. 24).
- Schuman trainee at the AI unit of the European Parliament.
- Leveraging LLMs to assess whether an application to the Transparency Register adheres to the applicable regulations.

🔖 **DLAB,** Student researcher (Master thesis), (Jan. 24 – Jun. 24).
- Introduced Fleet of Agents, a novel framework utilizing LLMs as agents to navigate through dynamic tree searches, employing a genetic-type particle filtering approach.
- Introduced CacheSaver, a framework that facilitates LLM requests by utilizing asynchronous, batched mechanisms to optimize costs and response time.
- **Perfect grade** of 6/6 in the Master's thesis, awarded to only **top 1%** of the students.

🔖 **Prediggo SA,** Data science intern, (Jun. 23 – Sep. 23).
- Developed an LLM-powered conversational bot to streamline business rule creation, enhancing user experience and accessibility.
- Utilized state-of-the-art methods to refine the conversational bot's capabilities, ensuring optimal user engagement and satisfaction in business rule creation.

🔖 **EPFL FUSTIC,** Research assistant, (Nov. 22 – Apr. 23).
- Conducted an extensive literature review and led the data collection and analysis of modern urban platforms, evaluating their capabilities in Urban Digital Twins.

Research Publications

Indicators : * Co-first authorship.

1. L. Klein*, **N. Potamitis***, R. Aydin, W. Robert, G. Caglar, and A. Arora, "Fleet of agents: Coordinated problem solving with large language models," ICML' 25.

2. **N. Potamitis***, L. Klein*, B. Mohammadi, *et al.*, "Cachesaver: A modular framework for efficient, affordable, and reproducible llm inference," EMNLP' 25 Findings.

3. **N. Potamitis**, L. Klein, and A. Arora, "Reasonbench: Benchmarking the (in)stability of llm reasoning," Under review: ICML' 26.

4   **N.Potamitis*** and A. Arora, "Are retrials all you need? enhancing large language model reasoning without verbalized feedback," Early results: EXAIT ICML' 25.

Projects

- **Semester project,** DLAB.
  Use of foundation models to simulate and study human web navigation. Led to a paper that is planned to be published in ICLR' 25
- **Deep learning in biomedicine,** EPFL .
  Introduced and tested a novel benchmark for few-shot learning algorithms.
- **Natural language processing,** EPFL.
  Used reinforcement learning from human feedback (RLHF) to train an LLM powered chatbot.
- **Deep learning,** EPFL.
  Implemented and deployed a deep learning framework to train an image restoration model .
- **Network machine learning,** EPFL.
  Trained graph neural networks on social graphs, to study and predict properties of nodes.
- **Systems for data management** EPFL.
  Implemented large-scale data processing pipelines and recommender systems for a streaming application.
- **Large-scale data,** EPFL.
  Utilized large amounts of real data provided by SBB to create our own train route planner application.
- **Machine learning,** EPFL.
  Deployed shallow and deep learning models to perform sentiment classification on twitter posts.

Technical skills

Programming	Python, JavaScript, Scala, SQL, C++, Shell scripting.
Frameworks	PyTorch, TensorFlow, Hugging Face Transformers, Fast.ai, Pandas.
Interests	Natural Language Processing, Deep Learning, Graph Neural Networks, Statistical Analysis, Data Visualization, Data mining, Big Data Processing.
Misc	Git, Docker, NodeJs, Matlab, LaTeX, Power BI, Amazon Web Services, Microsoft Azure.
Languages	Greek (Native), English (Full professional proficiency), French (Limited professional proficiency).

References

Prof. Akhil Arora
Assistant professor
Department of Computer Science
Aarhus University, Denmark
✉ akhil.arora@cs.au.dk

Prof. Robert West
Associate Professor
School of Computer and Communication Sciences
EPFL, Switzerland
✉ robert.west@epfl.ch

Prof. Caglar Gulcehre
Assistant Professor
School of Computer and Communication Sciences
EPFL, Switzerland
✉ caglar.gulcehre@epfl.ch

Dr. Lars Henning Klein
Co-founder and CTO
Timely
EPFL, Switzerland
✉ lars.klein@epfl.ch