

Arastun Mammadli

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Profile

I am a first-year Ph.D. candidate at Exeter, and a research assistant at the UCL NLP group. My research is focused around collaborative intelligence. I work towards better understanding the inter and intra-agent dynamics, to improve coordination, cost-efficiency, and transparency of multi-agent systems. Previously I interned at Microsoft for my master's dissertation, working on a multi-agent multi-model energy management system.

Education

University of Exeter

Ph.D. Computer Science: LLM-based Agent Systems (Prof. Shiqiang Wang) May 2026 – Present

Imperial College London

MSc Applied Computational Science and Engineering, Distinction Oct. 2024 – Oct. 2025

University of Exeter

BSc Computer Science, First-Class Honours Sept. 2020 – May 2024

Work Experience

University College London, Research Assistant Nov. 2025 – Present

- Contributing to an active research programme on agent search under Prof. Emine Yilmaz at the NLP Group.
- Work spans empirical benchmarking, recommendation systems, and capability estimation in open environments.

Microsoft, Research Intern June 2025 – Sept. 2025

- Developed a full-stack LLM-based multi-agent framework with Azure AI for energy management.
- Culminated in a master's thesis: presented as a university poster and a Microsoft Developer blog.

Imperial College London, Internal Projects Nov. 2024 – May 2025

- 4 projects: numerical solvers, deep time-series forecasting, image processing, evolutionary optimisation.
- Collaborated with team of 8, managed inter-team coordination (incl. task allocation, project sustainability).

Embawood LLC, Software Developer Intern, Baku, Azerbaijan May 2023 – Aug. 2023

- Java Spring Framework: Spring Boot, Spring Data, RESTful service components.
- Code reviews, technical presentations, unit and integration testing (JUnit), supporting CI/CD pipelines.

Selected Publications

Cost-Optimal LLM Routing with Limited User Feedback under User Satisfaction Guarantees

Herbert Woisetschlager, [Arastun Mammadli](#), Ryan Zhang, Shiqiang Wang

Preprint, arXiv:2606.19376, 2026

AgentSearchBench: A Benchmark for AI Agent Search in the Wild

Bin Wu*, [Arastun Mammadli](#)*, Xiaoyu Zhang, Emine Yilmaz

Preprint, arXiv:2604.22436, 2026 *Equal contribution

Skills

ML & Deep Learning: PyTorch, HuggingFace Transformers, Sentence Transformers, Scikit-learn, NumPy

Data & MLOps: Azure AI Services, Pinecone, FAISS, W&B, Docker, Slurm, REST APIs, Jupyter

Languages: Fluent in English, Russian, Azerbaijani, and Turkish