

Amirreza Alasti

AI Engineer · Agentic Systems · LLM Agents

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👤 PROFILE

AI Engineer focused on **agentic LLM systems**, with an **M. Sc. in Computer Engineering (grade 1.0, top of the German scale)**. Experienced from architecture to deployment: **context engineering, knowledge-graph agent memory, cost-aware model routing, guardrails with human-in-the-loop** and **CI/CD on Microsoft Azure and Microsoft Foundry**. At Volkswagen, built a web agent for multi-step workflows with **up to 95.9 % strict success rate**. First author at **CIKM 2026** and **DAI 2025**; starting a Ph. D. on **agentic AI systems** at the **L3S Research Center** in Dec 2026.

✂ SKILLS

Agentic Systems	LangGraph, AutoGen, MCP, A2A, ACP, multi-agent workflows, tool use, context engineering, agent memory (knowledge graphs), guardrails & human-in-the-loop
LLM Engineering	RAG, vision-language models, web agents, model routing, evaluation & benchmarking
Machine Learning	PyTorch, TensorFlow, PEFT, quantization & distillation, distributed training & inference, reinforcement/curriculum learning, time series, audio/signal processing (Librosa, SciPy)
Cloud & DevOps	Microsoft Azure, Microsoft Foundry, Google Cloud Platform, Docker, CI/CD, Git, Linux
Software & Data	Python, React, Next.js, .NET, SQL & NoSQL, SPARQL, ontologies, ORKG
Languages	English: fluent (C1, TOEFL iBT 106) · German: fluent (C1, telc) · Persian: native

🏢 EXPERIENCE

Master's Thesis Student – LLM Agents

Volkswagen AG

Apr 2026 – Oct 2026

📍 Wolfsburg, Germany

- Designed and built an **LLM web agent for multi-step workflows** using *agentic context engineering* and *selective multi-modal reasoning* – **strict success rate of 69.7 % to 95.9 %** across multiple benchmarks ([thesis](#), [published](#)).
- Context engineering**: structured DOM preprocessing as the agent's context foundation.
- Agent memory**: knowledge-graph architecture for sequential states in long-running tasks.
- Cost-aware model routing**: compute-heavy vision-language models are invoked only when pages are ambiguous or the system state is uncertain.
- Guardrails & human-in-the-loop**: validation layer combining model confidence with rule-based safety criteria; critical actions run only after human approval.
- Deployment**: built **CI/CD production pipelines** for MCP servers and software on **Microsoft Azure** and **Microsoft Foundry**.

Intern – AI-Based Speech Signal Processing

Sonova

Oct 2025 – Mar 2026

📍 Hannover, Germany

- Bandwidth extension of occluded in-ear speech signals (earbuds, headbands) via **neural reconstruction**.
- Curated and recorded a custom speech dataset; developed data augmentation strategies for different noise sources.
- Implemented, trained and compared **real-time-capable models** with PyTorch, Librosa and SciPy.

Student Research Assistant – AI Engineering & Research Software

TIB – Data Science & Digital Libraries Research Group (IDaS)

Nov 2024 – present

📍 Hannover, Germany

- TIB Alssistant**: co-developed an **LLM-based assistant** that supports researchers across the entire research and writing process with reliable, source-grounded answers.
- OntoAligner**: contributed to development and documentation of a Python library for ontology alignment. 🏆 *Best Resource Paper Award, ESWC 2025*
- NLP4RE**: automation pipeline converting NLP4RE ID cards into the **Open Research Knowledge Graph (ORKG)** to answer competency questions over the knowledge-graph data.

Software Engineer & Data Science Researcher

Samian Soft

Apr 2022 – Jul 2024

📍 Mashhad, Iran

- Built **AI-driven automation** for process management in **ERP and CRM systems** (React, Next.js, .NET).
- **Lead developer** of point-of-sale (POS) software as **progressive web apps (PWA)**.
- **Bachelor's thesis (grade 1.0)**: optimized visitor and freight distribution by combining routing algorithms (**VROOM**) with clustering methods – shorter routes and higher efficiency.
- Coordinated AI thesis projects with the university; mentored interns.

🎓 EDUCATION

Ph. D. – Agentic AI Systems

L3S Research Center, Leibniz University Hannover

starting Dec 2026

📍 Hannover, Germany

- Research on **agentic AI systems** and their **foundational methods** – from training agents to representation learning with **JEPA** (Joint-Embedding Predictive Architectures).
- **SciJEPA**: JEPA embeddings for scientific knowledge graphs; supervised by Prof. Dr. Sören Auer.

M. Sc. Computer Engineering (overall grade 1.0)

Leibniz University Hannover

Oct 2024 – Oct 2026

📍 Hannover, Germany

- **Thesis**: *Supporting Multi-Step Workflows with LLM-Based Web Automation using Agentic Context Engineering and Selective Multimodal Reasoning* – in cooperation with Volkswagen AG.

B. Sc. Computer Engineering (grade 1.8 · final 2 years 1.2)

Ferdowsi University of Mashhad

Sep 2019 – Feb 2024

📍 Mashhad, Iran

- **Teaching Assistant** for six B. Sc. courses, incl. Artificial Intelligence, Databases and Software Engineering.

📄 PUBLICATIONS

- CIKM'26** A. Alasti, N. Ghandeharioun, O. Karras. **WCI: The Web Context Interface**. *ACM International Conference on Information and Knowledge Management (CIKM)*, 2026. **Accepted**.
- REFSQ'26** A. Alasti, L. John, O. Karras. **From PDFs to Structured and FAIR Knowledge: Organizing NLP4RE ID Cards in the Open Research Knowledge Graph**. *Joint Proceedings of REFSQ-2026 Workshops*, 2026.
- arXiv'26** O. Karras, A. Alasti, L. John, S. Aggarwal, Y. Celik. **EmpiRE-Compass: A Neuro-Symbolic Dashboard for Sustainable and Dynamic Knowledge Exploration, Synthesis, and Reuse**. arXiv:2602.22276, 2026.
- DAI'25** A. Alasti, E. Erdal, Y. Celik, T. Eimer. **Learning to Play Blackjack: A Curriculum Learning Perspective**. *International Conference on Distributed Artificial Intelligence (DAI)*, London, 2025.
- arXiv'25** S. Auer, A. Oelen, M. Y. Jaradeh, M. Khalid, F. Keya, S. K. Gaddipati, J. D'Souza, ..., A. Alasti, et al. **Towards AI-Supported Research: A Vision of the TIB Alssistant**. arXiv:2512.16447, 2025.

🏆 AWARDS

- **1st Place** – **Bremen Big Data Challenge 2026** (detection of age-related diseases)
- **Best Posters & Tools Award** – REFSQ 2026 (EmpiRE-Compass) · **Best Resource Paper Award** – ESWC 2025 (OntoAligner)
- **Deutschlandstipendium** (German national merit scholarship) · **Dean's List Award**, Leibniz University Hannover

🔗 ACTIVITIES

- **EmpiRE-Compass**: led a team of 5 students building a neuro-symbolic dashboard for analyzing research knowledge. 🏆 *Best Posters & Tools Award, REFSQ 2026*
- **ORKG Atlas**: neuro-symbolic dashboard for ORKG templates (**demo**); participant, summer school *AI and Knowledge Graphs for Scholarly Data* (AIKG-SD 2026), Lüneburg.
- **Area Chair (Meta-Reviewer)**, International Conference on Distributed Artificial Intelligence (DAI 2026)
- Member of the **AI Grid** (early-career AI network) · Stage Staff, **WeAreDevelopers World Congress**, Berlin 2025