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About Me

Final-year MSc AI student eager to collaborate on building scalable AI solutions and developing AI models. Seeking a junior-level job opportunity for an AI/ML engineering role.

Work Experience

Generative AI Engineering Intern

Toyota Motor Europe - Confidential R&D project *March 2026 - September 2026*

- Designed and implemented synthetic image generation methods with a focus on speed, computational efficiency, and cost
- Evaluated and benchmarked multiple AI models for image generation
- Built an application integrating image generation methods to simplify user interaction and automate workflows

Research Assistant

University of Mazandaran *March 2022 - April 2023*

- Connected OpenFaaS resources to Grafana for visualization
- Provided a detailed walkthrough *video* of installing and running the OpenFaaS service

Teaching Assistant

University of Mazandaran *January 2022 - December 2022*

- Led 12+ IoT teams/45+ students, in designing, developing, and implementing IoT solutions
- Installed an open-source IoT platform on university servers

Education

University of Bologna — Bologna, Italy

Master's in Artificial Intelligence (28/30) *September 2023 – March 2027*

University of Mazandaran — Mazandaran, Iran

Bachelor's in Computer Engineering (18/20) *September 2018 – February 2023*

Selected Projects

Open-source Agents Tests and Experiments — *February 2026*

Private | Agentic Systems, System Design, Infrastructure Setup

- Installed and managed end-to-end multi-agent workflows with OpenClaw and Hermes
- Focused on accessibility, reliability, remote connection, and system design

Multi-Agent Research — November 2025

GitHub | Agents, AIsuite, OpenAI API, Tavily, arXiv API, Wikipedia

- Built a multi-agent research system that plans topic investigations
- Dynamically routes tasks to the right agent among researcher, writer, and editor agents
- Integrated Tavily web search, arXiv retrieval, and Wikipedia search tools

Tokenizer and LLMs Training Study — August 2025

Private | BPE, LLMs, Tokenization, K-Means, PCA, CuML

- Studied GPT-2's, Llama's and FastText's tokens' embeddings using K-Means to identify semantic clusters
- Reframed the standard next-token prediction as a next-multi-token prediction task using clusters
- Used clusters to change the traditional Cross-Entropy loss to Binary Cross-Entropy (BCE) loss

WellnessBuddy — June 2025

GitHub | Ollama, Google Fit API, Health, Anomaly Detection

- Developed an AI wellness backend-based application that analyzes sleep patterns
- Implemented an Anomaly Detector using statistical methods

- Used Ollama's open-source LLM, enabling personalized health recommendations
- Engineered a modular architecture with sample data generation that mimics Google Fit API structure

ArtBuddy May 2025

GitHub | OpenAI API, Smolagents, Image Generation, SQLite, Prompt Engineering

- Developed an AI art assistant for image/text generation, analysis, and discussion
- Designed a modular agent-based architecture with prompt engineering and tool management

LeetCode Problems Dataset May 2025

HuggingFace | Synthetic Data, Dataset Creation, Web Scraping, Instruction Generation

- Conducted extensive web crawling of the LeetCode website to gather problem information and metadata
- Developed a high-quality dataset of LeetCode problems, including problem descriptions and starter code
- Provided an instruction dataset based on the crawled data for instruction tuning tasks

Reading Assistant March 2025

GitHub | OpenAI API, RAG, Gradio, LangChain, Embedding Model, Vector Databases

- Developed a RAG-powered document reading assistant using LangChain and Gradio
- Built a web interface for PDF uploads and natural language question-answering

Blind Source Separation February 2025

GitHub | TensorFlow, Keras, U-Net, Autoencoder-Decoder, MNIST datasets

- Trained U-Net and Autoencoder-Decoder architectures to separate mixed MNIST images
- Achieved a low MSE of 0.00086 with the U-Net architecture
- U-Net significantly outperformed the Autoencoder-Decoder with an MSE of 0.0048

Sexism Detection with Deep Learning and LLMs January 2025

GitHub | Bi-LSTM, Transformer, GloVe, Mistral V2/V3, Prompt Engineering

- Implemented Bi-LSTM and Transformer models for sexism classification on the EXIST dataset, achieving test F1-scores of 0.71 and 0.83, respectively
- Evaluated Mistral V2/V3 for sexism detection in tweets using zero-shot and few-shot prompting
- Reached 0.74 F1-score with Mistral V2 (zero-shot, 30/300 prompt-following failures) and 0.72 with Mistral V3 (3-shot, no failures on the same samples)

Multiple Courier Planning Problem December 2024

GitHub | Combinatorial Decision Making, Constraint Programming, Optimization, MiniZinc

- Collaborated effectively as a team member to address a complex optimization problem
- Tested 4 different modeling approaches for the planning problem
- Took primary responsibility for the MiniZinc implementation and modeling within the team
- Results suggest MiniZinc is a reliable choice for many combinatorial problems

Skills

Languages: Python, MiniZinc, Prolog, LaTeX, C
Frameworks: TensorFlow, PyTorch, LangChain, LlamaIndex, Django
Tools: Grafana, Cloud, Git, Docker, Kubernetes, OpenFaaS, API, Ollama
Soft Skills: Problem-Solving, Team Collaboration, Adaptability, Leadership and communication

Selected Courses

Hugging Face Agents | GenAI Application with RAG and LangChain | AI Agents Using RAG and LangChain
Deep Learning Specialization | NLP Specialization | ML Specialization

Languages and Technical Reading

Languages: English (C1), Persian (Native), Italian (Limited Working Proficiency)