

Ilhan Karić

Senior Machine Learning Engineer

Mostar, Bosnia and Herzegovina, working remotely

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Profile

Senior machine learning engineer with eight years of professional experience across production systems, applied research and university teaching, and the owner of Syntonic, an independent practice registered in Zenica. Programming since 2007, first as a hobby and through competitive programming, then as a profession. The work covers the whole life of a machine learning product: data acquisition through scraping and ETL, the data science needed to understand it, model building, training and optimization, deployment, and monitoring for regression and drift. In recent years the focus has shifted to LLM and agentic systems built with LangChain and the Pydantic ecosystem, running on Azure and GCP with models from Anthropic, OpenAI, Google and xAI. Microsoft Certified Azure AI Engineer Associate, with published research in applied and theoretical artificial intelligence.

Experience

Senior Machine Learning Engineer

Mar 2023 to 2026

evoila Bosnia d.o.o., full-time, remote

- Build and maintain production machine learning systems, from data acquisition, scraping and ETL through model development, training and optimization in Python and TensorFlow to deployment and long-term monitoring for regression and drift.
- Led the development of a custom AI assistant for more than a year, owning project management and the roadmap while contributing daily across the backend, API layer and frontend. It started as a proof of concept and runs in production today.
- Develop LLM-based and agentic applications on LangChain and the Pydantic ecosystem, integrating models from Anthropic, OpenAI, Google and xAI.
- Deliver customer solutions on Azure and GCP, including Vertex AI and the Azure AI services, alongside workloads on Hetzner VPS and Kubernetes clusters managed through their API.
- Automate builds and deployments with Docker and GitHub Actions, with backend work in Python and C#/.NET.

Machine Learning Specialist

Dec 2022 to Feb 2023

Self-employed, freelance, remote

Teaching Assistant

Jun 2021 to Feb 2023

Faculty of Information Technologies, University “Džemal Bijedić” of Mostar

- Taught Software Engineering, Software Architecture and Programming, with responsibility for grading, supervision and student mentoring.

Research Assistant

Mar 2019 to Jun 2021

Faculty of Information Technologies, University “Džemal Bijedić” of Mostar

- Research in artificial intelligence, with peer-reviewed papers on neuroevolution, similarity search over sequential data and an artificial teaching assistant.

Graphics Application Developer

Sep 2018 to Mar 2019

Four Game Studio, Mostar

- Worked on multiple projects in C# with the Unity3D engine, covering games, simulations and 3D visualization systems.
- Built a 3D mass monitoring and crowd density and flow analysis system supporting real-time tracking of upwards of 250,000 people, for high-security facilities, event venues and oil rigs.

Skills

Machine learning	Python, TensorFlow, model training and optimization, data science, ETL and web scraping, model observability, regression and drift tracking
LLMs and agentic AI	LangChain, Pydantic AI, agentic frameworks, chatbot development, Anthropic, OpenAI, Google and xAI APIs
Cloud and MLOps	Azure (AI services, certified), GCP (Vertex AI), Docker, GitHub Actions CI/CD, Kubernetes (via API), Hetzner VPS
Software engineering	C#/.NET, full-stack development (backend, frontend, API design), REST APIs, Git, Unity3D
Leadership	Project management, technical project leadership, teaching and mentoring, research

Education

Master's degree, Information Technology	Oct 2021 to Dec 2022
Faculty of Information Technologies, University "Džemal Bijedić" of Mostar. Grade 10.	
Bachelor of Information Technology	2014 to 2018
Faculty of Information Technologies, University "Džemal Bijedić" of Mostar. Grade 10.	
Secondary technical school	2010 to 2014
Tehnička škola Zenica	

Publications

21 citations, h-index 2. Full list on [Google Scholar](#).

- **Scarlet: Artificial Teaching Assistant.** Karić, Mušić, Junuz, Mirza (2017). International Conference on Control, Artificial Intelligence, Robotics and Optimization (ICCAIRO). 16 citations.
- **Analysis of Neuroevolution for Feedforward Neural Networks.** Marić, Karić, Hodžić (2022). International Symposium on Innovative and Interdisciplinary Applications of Advanced Technologies (ISIAT). 3 citations.
- **Contextual Similarity: Quasilinear-Time Search and Comparison for Sequential Data.** Karić, Vejzović (2017). ICCAIRO. 2 citations.
- **Analysis of Neuroevolution for Feedforward.** Marić, Karić (2022). Advanced Technologies, Systems, and Applications VII, Springer proceedings.
- **Artificial Teaching Assistant: Scarlet.** Karić, Vejzović, Mušić, Junuz, Smajić. Conference paper.

Certifications

- **Microsoft Certified: Azure AI Engineer Associate (AI-102)**, Microsoft, Oct 2024, valid until Oct 2026
- **ISO/IEC 27001:2017 Information Security Management System**, DEUDAT GmbH, Mar 2025
- **Data Privacy, basic course and refresher training**, DEUDAT GmbH, Mar 2025
- **Introduction to Quality Management**, DEUDAT GmbH, Mar 2025
- **Introduction to Environmental Management**, DEUDAT GmbH, Mar 2025
- **Safe Working in the Home Office**, DEUDAT GmbH, Jan 2026

Languages

Bosnian (native) **English** (fluent, C2) **German** (upper-intermediate, B2)