



Karim Osman - AI Engineer

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ABOUT ME

Highly accomplished and results-driven **AI Engineer** with a strong background in machine learning, deep learning, and data engineering. Proven ability to design, develop, and deploy scalable **AI/ML solutions**, optimize data-driven systems, and implement robust **DevOps** practices. Adept at leveraging cloud platforms (**AWS, GCP, Azure**), containerization (**Docker, Kubernetes**), and **CI/CD** pipelines to facilitate seamless integration and operational efficiency, seeking to apply expertise in cutting-edge AI technologies to drive innovation and deliver impactful solutions.

WORK EXPERIENCE

Bakerhughes (via Hermes Trade company) – Florance, Italy

City: Florance | Country: Italy

AI Engineer

[25/11/2024 – Current]

- Developed and deployed AI solutions, including "RAG as a service" and "LLM as a service" platforms, enhancing accessibility and scalability of AI capabilities.
- Implemented "Chat with document" features, enabling interactive querying of diverse document types.
- Designed and executed comprehensive benchmarking strategies for AI models, ensuring optimal performance and reliability.
- Created "Summarization as a service" for single and multi-page PDFs and various document types, offering both single and multi-level summarization.
- Developed "Chunk as a service" for efficient document processing, improving data handling workflows.
- Utilized CV2 and Yolo for advanced detection projects, demonstrating expertise in computer vision.
- Integrated and fine-tuned Hugging Face models for specific AI applications, optimizing model performance.
- Managed and deployed AI solutions within AWS environments, leveraging various AWS services for robust infrastructure.

Configuratori – Florance, Italy

City: Florance | Country: Italy

Software Engineer | Machine Learning Engineer | Data Scientist

[02/08/2021 – 20/11/2024]

- Designed and implemented innovative **machine learning models** and software prototypes, improving predictive performance by **20%**.
- Developed custom algorithms tailored to specific industry needs, enhancing data processing efficiency by **25%**.
- Collaborated with cross-functional teams to integrate **AI solutions** into existing systems, resulting in a **30%** increase in workflow efficiency.
- Evaluated and deployed **deep learning architectures** for diverse applications, including neural networks and reinforcement learning.

Klimsoft – Siena, Italy

City: Siena | Country: Italy

Data analysts

[04/2021 – 18/06/2021]

- Led data analysis projects with **IBM** for MPS using **Cognos V11**, enhancing report accuracy and decision-making processes.
- Employed **statistical methods** and data visualization techniques to derive actionable insights, improving data reporting by **40%**.
- Designed and implemented **Business Intelligence** dashboards, integrating multiple data sources and increasing analytic capabilities.

 **Siead** – Rome, Italy

City: Rome | Country: Italy

UiPath Developer (Intern)

[02/2021 – 04/2021]

- Developed automation scripts for quality verification of integrated systems, reducing error rates by **15%**.
- Analyzed automation reports and collaborated with development teams for continuous improvement.

 **UniqMaster** – BREMA, Germany

City: BREMA | Country: Germany

Backend

[20/11/2020 – 03/2021]

- Designed and implemented **RESTful APIs** for efficient data exchange between applications, enhancing system integration.
- Contributed to an Agile Scrum team, facilitating a high-tempo production environment and improving project delivery timelines.

EDUCATION AND TRAINING

Machine Learning Engineering

Paris 1 Panthéon-Sorbonne University [09/2023 – 08/2024]

City: Paris | Country: France | Website: <https://www.pantheonsorbonne.fr/> | Level in EQF: EQF level 5

Over-Seas Program

Akita International University [09/2020 – 03/2021]

City: Akita | Country: Japan | Website: <https://web.aiu.ac.jp/en/>

Erasmus Program

Universität Liechtenstein [11/02/2019 – 30/06/2019]

City: Vaduz | Country: Liechtenstein | Website: <https://www.uni.li>

Master Degree of Finance

università di Siena [10/2017 – 06/2022]

City: Siena | Country: Italy | Website: www.unisi.it

LANGUAGE SKILLS

Mother tongue(s): Arabic

Other language(s): English | Italian | German | French

SKILLS

RAG / Benchmark / CWD / LLM

Programming Languages

Python, R, SQL, Java, C#, Groovy, VB, JavaScript, PHP

Machine Learning & Data Science

Java, Python, C++, Keras, Pandas, VHDL, TensorFlow, SQL / Machine Learning: scikit-learn, TensorFlow, PyTorch / Deep Learning: Transformers (BERT, GPT), CNNs, RNNs, LSTMs, U-NET, RESTNET50 / Data Science: Pandas, NumPy, SciPy, Statsmodels / Data Visualization: Matplotlib, Seaborn, Plotly

Big Data & Cloud Technologies

Cloud Platforms: AWS (SageMaker, EC2), GCP (AI Platform), Azure / Big Data Tools: Hadoop, Spark, Hive / MLOps & Deployment: Docker, Kubernetes, CI/CD, MLflow, AirFlow / Databases: PostgreSQL, MySQL, MongoDB, Redis / Jenkins

ORGANISATIONAL SKILLS

Key Skills

- **Machine Learning & AI:** Model development, deep learning, algorithm optimization, neural networks.
- **Data Engineering:** ETL processes, data pipeline construction, data integration, data warehousing.
- **DevOps Practices:** CI/CD pipelines, containerization, infrastructure automation, monitoring, and logging.
- **Business Intelligence:** Reporting, data visualization, statistical analysis, dashboard design.