Malek BEN YOUSSEF

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📍 Munich, Germany 🔗 website

EDUCATION

Master of Engineering in Computer Science
National Institute of Applied Sciences and Technology (INSAT) ⧉
2021 – Present | Tunis, Tunisia

Bachelor of Engineering in Computer Science
National Institute of Applied Sciences and Technology (INSAT) ⧉
2019 – 2021 | Tunis, Tunisia
Relevant Courses: Linear Algebra, Database Management, Algorithms and Data Structures, Deep Learning, Cloud Computing, Big Data, Optimization Methods, Reinforcement Learning, NLP

LANGUAGES

English: Proficient
French: Proficient
Spanish: Basic

CERTIFICATES

Professional Machine Learning Engineer ⧉
Google Cloud

Deep Learning Specialization ⧉
DeepLearning.AI

Scrum Fundamentals ⧉

SKILLS

Programming Languages
Python, C, C++, Java, SQL

Machine Learning & AI Frameworks
TensorFlow, scikit-learn, LangChain, LlamaIndex, SpaCy, NLTK, Hugging Face

Cloud & MLOps
Google Cloud Platform (GCP), Vertex AI, BigQuery, Looker Studio, Apache Airflow, Docker, CI/CD, GitHub Actions, Flask

PROFESSIONAL EXPERIENCE

Data Engineer Intern
Crewmeister
February 2025 – present | Munich, Germany
- Automated ETL and ELT Airflow pipelines to ingest and process data from diverse sources into the BigQuery data warehouse.
- Implemeted cost efficient data workflows using Airflow automation and materialized views, reducing query costs by over 25%.
- Ensured 98% data accuracy through automated quality checks and anomaly detection using Dataplex, Cloud Composer, and Dataflow.
- Migrated 4TB of datasets from the US to the EU region using Cloud Composer orchestration and Cloud Storage.
- **Skills**: GCP, BigQuery, SQL, Apache Airflow, Looker Studio, Python, Docker, Git, Gitlab

Machine Learning Intern
Premier Cloud Inc
July 2024 – September 2024 | Victoria, British Columbia, Canada · Remote
- Built an NL2SQL system converting user prompts into SQL queries with natural language responses
- Helped the company's sales managers to quickly retrieve customer billing information
- Performed SQL query optimization, improving information retrieval speed by 30%.
- Deployed the application using Google Cloud Run and managed a CI/CD pipeline with Google Cloud Build
- **Skills**: GCP, BigQuery, SQL, Gemini, Vertex AI, Prompt Engineering, Docker

Machine Learning Engineer (Part-Time)
Silver Brain AI AG
November 2023 – January 2024 | Geneva, Switzerland · Remote
- Developed a chatbot using the pre-trained LLaMA 2 model with 7 billion parameters to deliver detailed information about the company's services to clients.
- Employed Retrieval-Augmented Generation (RAG) techniques to optimize LLM text generation, resulting an improvement of approximately 30% in output quality
- *Skills:* Python, LangChain, LlamaIndex, Prompt Engineering, FastAPI

Full Stack Developer Intern
Safran
July 2023 – September 2023 | Tunis, Tunisia
- Created a dashboard for 100+ users, that offers quick access to the company's equipment status.
- Integrated data visualization and real-time updates, achieving a 25% improvement in operational efficiency
- **Skills:** Angular, Spring Boot, MySQL

PROJECTS

Autonomous Navigation using Deep Reinforcement Learning
June 2024
- Developed an autonomous robot navigation system employing the TD3 algorithm, resulting in a significant 85% improvement in navigation accuracy.
- Implemented deep reinforcement learning techniques to enable obstacle avoidance, achieving a 92% success rate in various test environments.
- **Skills:** Python, ROS2, Rviz, Gazebo, TensorFlow.

Soccer Chatbot
December 2023
- Built an information retrieval system about soccer based on 1000+ PDF file pages.
- Applied Llama 2 Model and RAG techniques achieving an exceptional 95% accuracy in information retrieval.
- **Skills:** Python, LangChain, Chainlit, FAISS, OpenAI Embeddings, Llama2