

MALEK BEN YOUSSEF

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PROFESSIONAL EXPERIENCE

Data Engineer Intern

Crewmeister

Feb 2025 – Present

Munich, Germany

- Developed Airflow ETL/ELT pipelines into BigQuery and Snowflake Data warehouses.
- Implemented cost efficient data workflows using Airflow automation, reducing query costs by over 25%
- Ensured 98% data accuracy through quality checks with Dataplex, Cloud Composer, and Dataflow.
- Implemented Medallion architecture using dbt for modular models and Terraform for an "everything as code" approach.
- Skills:** GCP, BigQuery, dbt, SQL, Apache Airflow, Looker Studio, Python, Docker, Git

Machine Learning Intern

Premier Cloud

Jul. 2024 – Sep. 2024

Victoria, British Columbia, Canada · Remote

- Built an NL2SQL chatbot converting user prompts into SQL queries, resulting natural language responses.
- Deployed the application using Google Cloud Run and managed a CI/CD pipeline with Google Cloud Build.
- Performed SQL query optimization, improving information retrieval speed and enhanced LLM output accuracy.
- Skills:** GCP, BigQuery, SQL, PostgreSQL, Vertex AI, Docker, Git, PySpark

Machine Learning Engineer (Part-Time)

Silver Brain AI AG

Nov. 2023 – Jan. 2024

Geneva, Switzerland · Remote

- Developed a chatbot using Llama 2 LLM (7B parameters) to provide detailed service information to clients.
- Employed RAG techniques to optimize LLM text generation, improving output quality by 30%.
- Integrated and deployed the chatbot application in a web app, managing a CI/CD pipeline
- Skills:** Python, LangChain, LlamaIndex, Prompt Engineering, FastAPI, Git

Full Stack Developer Intern

Safran

July. 2023 – Sep. 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.
- Skills:** Angular, Spring Boot, Git, SQL, REST APIs

EDUCATION

National Institute of Applied Sciences and Technology (INSAT)

National Engineer's Degree in Computer Science

Tunis, Tunisia

Sept. 2020 – Jan. 2025

Relevant Courses: Linear Algebra, Database Management, Algorithms and Data Structures, Deep Learning, NLP, Cloud Computing, Big Data, PySpark, Data Engineering, Reinforcement Learning, BI

PROJECTS

Autonomous Navigation using Deep Reinforcement Learning

May. 2024 – Jul. 2024

- Developed an autonomous robot navigation system employing the TD3 algorithm.
- Implemented deep reinforcement learning techniques achieving 92% success rate in obstacle avoidance.
- Skills:** Python, SQL, PostgreSQL, TensorFlow, Gazebo, Markov Decision Processes, Q-learning, Deep Q-Learning (DQN).

Soccer Chatbot

Dec. 2023 – Jan. 2024

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

CERTIFICATES

Professional Machine Learning Engineer

Google Cloud

Jul, 2024

Deep Learning Specialization

DeepLearning.AI

Feb, 2024

Scrum Fundamentals

SCRUMstudy

Feb, 2022

SKILLS

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

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

Cloud & MLOps: GCP, AWS, Vertex AI, BigQuery, Apache Airflow, PySpark, Docker, dbt, Flask

Languages: English (Fluent), French (Proficient), Spanish (Basic), German (Basic)