

MALEK BEN YOUSSEF

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PROFESSIONAL EXPERIENCE

Data Engineer Intern

Crewmeister

Feb 2025 – Present

Munich, Germany

- Built automated ETL pipelines to ingest and process data from multiple SaaS APIs into BigQuery
- Replaced Airflow pipelines and standard views with BigQuery materialized views, reducing query costs by over 25%.
- Implemented data quality checks and anomaly detection using BigQuery + Dataplex, resulting 98% data accuracy.
- Optimized SQL queries, cutting query size and reducing BigQuery costs.
- **Skills:** GCP, BigQuery, SQL, Apache Airflow, Looker Studio, Python

Machine Learning Intern

Premier Cloud

Jul. 2024 – Sep. 2024

Victoria, British Columbia, Canada · Remote

- Built an NL2SQL chatbot converting user prompts into SQL queries with natural language responses
- Helped the company's sales managers to quickly retrieve customer billing information
- Worked with Gemini LLM and achieved approximately 95% output accuracy.
- Optimized SQL queries, reducing query size and achieving a 30% reduction in BigQuery billing.
- Deployed the application using Google Cloud Run and managed a CI/CD pipeline with Google Cloud Build.
- **Skills:** GCP, BigQuery, SQL, Gemini, Vertex AI, Looker Studio, Prompt Engineering, Generative AI, Git

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

SKILLS

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

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

Cloud & MLOps: Google Cloud Platform, Vertex AI, BigQuery, Apache Airflow, Docker, CI/CD, GitHub Actions, Flask

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

PROJECTS

Autonomous Navigation using Deep Reinforcement Learning

May. 2024 – Jul. 2024

- Developed an autonomous robot navigation system using the TD3 algorithm.
- Achieved an 85% improvement in navigation accuracy.
- Implemented deep reinforcement learning for obstacle avoidance, achieving 92% success rate in tests.
- **Skills:** Python, ROS2, Rviz, Gazebo, TensorFlow.

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

EDUCATION

National Institute of Applied Sciences and Technology (INSAT)

National Engineer's Degree in Computer Science

Tunis, Tunisia

Sept. 2020 – Present

Relevant Courses: Linear Algebra, Database Management, Algorithms and Data Structures, Deep Learning, NLP, Cloud Computing, Big Data, Optimization Methods, Reinforcement Learning

CERTIFICATES

Professional Machine Learning Engineer

Google Cloud

Jul, 2024

Deep Learning Specialization

DeepLearning.AI

Feb, 2024

Scrum Fundamentals

SCRUMstudy

Feb, 2022