




Malek BEN YOUSSEF


Machine Learning Engineer

✉ malek.benyoussef@insat.ucar.tn  ben-youssef-malek  malekex6  website



EDUCATION

Computer Science Engineering

National Institute of Applied Sciences and Technology (INSAT) 
2021 – Present | Tunis, Tunisia
Specialization: Artificial Intelligence.

Pre-Engineering

National Institute of Applied Sciences and Technology (INSAT) 
2019 – 2021 | Tunis, Tunisia
Maths-Physics-Computer Science

LANGUAGES


English
Proficient

French
Proficient

Spanish
Basic

CERTIFICATES

Professional Machine Learning Engineer 
Google Cloud

Deep Learning Specialization 
DeepLearning.AI

Scrum Fundamentals 

SKILLS

Python
Google Cloud Platform (GCP)
Vertex AI, BigQuery
Looker Studio
TensorFlow, Keras
LangChain, LlamaIndex
SpaCy, NLTK, Beautiful Soup
Competitive Programming
Database and Data Management
Version Control (Git / GitHub)
Docker, CI/CD
Google Cloud Run, Cloud Build
Cloud infrastructure management

PROFESSIONAL EXPERIENCE

Machine Learning Intern

Premier Cloud Inc
July 2024 – present | Victoria, British Columbia, Canada

- Built an NL2SQL system that converts prompts from sales managers into SQL queries and generates natural language responses about customers billing information.
- Worked with Gemini LLM and achieved approximately 95% output accuracy.
- Performed SQL query optimization, improving information retrieval speed by 40%.
- 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

Machine Learning Engineer

Silver Brain AI AG
November 2023 – January 2024 | Geneva, Switzerland

- 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, Lama2, Prompt Engineering

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.
- Integrating data visualization and real-time updates, achieving a 25% improvement in operational efficiency
- **Skills:** Angular, Spring Boot, MySQL

Data Scientist Intern

University of Moncton
July 2022 – September 2022 | New Brunswick, Canada

- Implemented a solution for colon disease detection that reduces 72% of false positives.
- Enhanced diagnostic precision by 85% in colon disease detection through the application of advanced data augmentation and EfficientNet model optimization techniques.
- **Skills:** Python, Keras, TensorFlow, OpenCV, EfficientNet(B0 to B7)

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