

Haitham Ismail

Machine Learning Engineer | Beirut, Lebanon | 0096171060782 | [haithamismail.github.io](https://github.com/haithamismail) | [haithamismail.hi@gmail.com](mailto:hi@gmail.com)

SUMMARY

Highly skilled Computer Engineer with a strong foundation in software development and machine learning. Proven expertise in Python, TensorFlow, and data analysis, with a deep understanding of machine learning algorithms and neural networks. Demonstrated ability to manage complex projects and solve challenging problems. Committed to continuous learning and staying updated with the latest AI technologies and trends. Looking forward to applying my skills and knowledge to contribute to innovative AI solutions.

EDUCATION

Bachelor of Engineering in Computer Engineering, Al Maaref University, October 2018 - June 2022

- Graduated with high distinction, consistently listed on the Dean's Honor List
- GPA: 3.96/4.0

SKILLS

- Software: Python, TensorFlow, Torch, C, C++, MATLAB
- Soft Skills: Excellent communication, problem-solving, critical thinking, teamwork, and time management skills.

EXPERIENCE

Embedded Software Engineer, Eigentec | June 2022 - September 2023

- Ported projects to Real-Time operating system, prioritizing functionalities into tasks and interrupts
- Designed and edited embedded software in C/C++ languages for NXP microcontrollers like i.MX RT1170-1160
- Ported Machine Learning pipelines to the micorcontrollers using packages like CMSIS DSP and TensorFlow Lite micro
- Set up communication between the microcontollers and other devices using SPI, UART, and Ethernet
- Set up Direct Memory Access for high speed data transfer between the peripherals
- Worked with several other boards including Analog Front-Ends and Freedom Boards
- Developed Python applications for user control of embedded software with data logging capabilities
- Documented projects for user-friendly customer interaction
- Technologies Used: Python, C, C++, NXP MCUXpresso, NXP FreeMASTER, NXP Microcontrollers, TF Lite micro

Machine Learning and Data Engineer, boxMind.ai | November 2024 - Present

- Developed an end-to-end automated call center that utilizes generative AI and MS Azure services to answer the customers' questions in a human-like fashion
- Developed a video search system that retrievees relevant clips from videos for user queries
- Optimized and refactored existing GenAI solution codebase for better RAG results and ease of development

- Fine-tuned large language models using state-of-the-art techniques including QLoRA and Deep Speed for fast and efficient training
- Assisted in building a data pipeline that syncs a storage and ingests different types of documents into a vector database
- Deployed different types of models such as LLMs, VLMs, stable diffusion, and embedding models, and integrated them into system
- Technologies Used: Torch, HuggingFace Transformers, LlamaIndex, LangChain, LangGraph, Docker, Airflow, Flask, Milvus, MS Azure, GoLang, Linux

Machine Learning Engineer, Freelancing, KATALYST | June 2024 - Present

- Implemented feature to ingest and parse images, videos, pdfs, and text files to the system
- Extracted description from images and videos using state-of-the-art vision LLMs
- Implemented a RAG system with a multi-modal database and open clip embeddings
- Technologies used: openCV, LanceDB, CLIP, LangChain, nltk

AI Bootcamp Instructor, youbee.ai | January 2024 - Present

- Created comprehensive explainer notebooks designed to be self-sufficient and to provide practical examples
- Recorded standalone sessions to explain each lesson
- Explained the lessons in live sessions to make the bootcamp more engaging
- Technologies used: Jupyter Notebooks, Markdown, Python, Numpy, Tensorflow, Pandas, Sci-kit Learn, Matplotlib

LANGUAGES

- Arabic: Native proficiency
- English: Full professional proficiency

CERTIFICATIONS

[Huawei Certified ICT Associate in Cloud Computing](#)

Certificate ID: 01010080280806277763629

[Deep Learning Specialization by DeepLearning.ai](#)

Certificate ID: THSMNWK72YRR

PUBLICATIONS

- [Internet-of-Things-Based Smart-Home Time-Priority-Cost \(TPC\)-Aware Energy Management System for Energy Cost Reduction](#)