

Mostafa Rammal

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Education

Lebanese American University
BE IN COMPUTER ENGINEERING

September 2020 - December
2024

Experience

Siren Analytics

June 2025 - Present

AI ENGINEER – FULL TIME

- Designed and implemented RAG-based solutions (chatbots, searches, etc..) using chunking strategies, embedding models, retrieval pipelines, reranking, and prompt optimization.
- Developed agentic AI solutions and deep-agent workflows for multiple products and features, supporting tool use, planning, and multi-step reasoning.
- Built AI harnesses to structure, test, and improve LLM-powered systems across retrieval, prompting, and agentic execution workflows.
- Investigated and compared multiple LLMs across different product use cases, focusing on response quality, reliability, and task suitability.
- Applied data science techniques and Python libraries such as Pandas, NumPy, and scikit-learn to analyze outputs, evaluate performance, and support model improvement.

Vanrise

April 2025 – June 2025

TECHNICAL SUPPORT ENGINEER – INTERN

- Supported technical operations and troubleshooting activities using SQL for data validation, issue investigation, and backend analysis.
- Developed Python scripts leveraging data science techniques and libraries to automate repetitive support tasks, analyze operational data, and improve efficiency.
- Gained hands-on exposure to telecom solutions including T.One, OSS/BSS systems, and Revenue Assurance workflows with governmental institutions (Ogero, touch, alfa).
- Collaborated with technical teams to analyze system issues, understand client requirements, and support telecom service operations.

Acksession

May 2024 - August 2024

REACT JS FRONT END DEVELOPER – INTERN

- Developed responsive front-end interfaces using React JS and Ant Design components.
- Integrated backend APIs into the front-end application, ensuring smooth data flow and user interaction.
- Collaborated with the front-end team to build and enhance UI pages for the main project.
- Improved page structure, component consistency, and interface usability across different project screens.

Java OOP & Algorithms Tutoring

August 2023 - December 2023

TUTOR – PART TIME

- Explained the Object-Oriented Programming, basics to advanced.
- Explained the Algorithms and Data structures feature with examples.

Numbase Group - Fintech Team

June 2023 - August 2023

FULL STACK WEB DEVELOPMENT – INTERN

- Developed full-stack web applications using Django and the Python Model-View-Template architecture.
- Built front-end interfaces using HTML, CSS, and AngularJS.
- Contributed to client projects from initial development to functional implementation.
- Worked on connecting front-end pages with backend logic to support dynamic web application features.

VINTOB

August 2022 - September 2022

REMOTE WEB DEVELOPMENT – INTERN

- Discovered the ASP.NET in MVC framework.
- Designed small applications.

Projects

MoIM Chatbot – Ministry of Interior and Municipalities

July 2025 - August 2025

RAG-BASED CHATBOT PROJECT

- Designed and implemented the workflow of a RAG-based chatbot for the Ministry of Interior and Municipalities to support accurate and context-aware responses.
- Developed core RAG components, including document chunking, embedding generation, retrieval, and reranking.
- Engineered and tested prompts for Qwen3 A3B 30B and GPT OSS 20B to improve response quality, reliability, and task performance.
- Built Python evaluation scripts to assess LLM responses, support quality assurance, and compare model outputs.

Final Year Project - Autonomous Pesticides Drone

September 2023 - May 2024

- Developed a machine learning model using Roboflow to support object detection and autonomous pesticide-spraying functionality.
- Configured and initialized the NVIDIA Jetson Nano environment using Ubuntu for edge AI deployment.
- Built a React JS user interface to monitor and interact with the drone system.
- Integrated AI, embedded computing, and front-end components to support the project's end-to-end functionality.

Technical Skills

Languages

Frameworks & Services

Tools

AI Knowledge

Observability

Databases

Data Science

OS

APIs & Backend

Languages

Python, Java OOP and Algorithms, SQL, Linux Bash Scripting

React JS, JavaScript, dockerization, Django, HTML, CSS, Spring Boot

Microsoft Office, Git, Swagger, Slack, Figma

Langchain, Langraph, Autogen RAGging, embedding models (BM25, etc.), chunking, Reranker, prompting, OpenAI, Hugging Face, OpenAI prompt playground

Grafana, Loki

Postgres, MySQL, Arangodb

NumPy, Pandas, Matplotlib, Seaborn, scikit-learn, SciPy, Plotly, Jupyter Notebook, data preprocessing, data analysis, data visualization, and model evaluation

Windows, Linux

Java, FastAPI

Arabic (Native), English