# Majed Alrogi

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#### **Education & Honors**

King Abdullah University of Science and Technology – GPA: 3.92/4.0 2023 - December 2024 Masters of Science in Computer Science Virginia Tech – GPA: 3.89/4.0 2019 - 2023 Bachelor of Science in Computer Science with minors in Cybersecurity and Mathematics KAUST Gifted Student Program, recipient of full-tuition merit scholarship 2019-2023 Virginia Tech, Dean's List 2019-2023

**Experience** 

## Software Engineer, IBM

February – Present

- Implemented a langchain Pull Request tool that creates, describes, and reviews PRs using the Large Language Models (LLMs) in WatsonX.ai
- Worked to integrate PR tool into Github as a Github app with webhooks

#### Software Engineer, Mozn

June – December 2024

- Designed and implemented data sharing procedures between services using proto3 and Apache Kafka
- Used FastAPI and sqlalchemy to work on FOCAL, an AI powered crime prevention suite
- Optimized mysql queries and gained a speedup of 92%

### **Research Intern**, King Abdullah University of Science and Technology

June – August 2022

- Wrote Installation packages for ExaGeoStat and all its dependencies through the Spack Package Manager
- Collaborated with the Barcelona SuperComputing Center to port ExaGeoStat to their containerization engine specialized for HPC programs

#### **Projects**

#### **Multi-Agent Document chat bot**

June 2024

- Created a RAG model with a vector DB to answer questions based on a collection of documents
- Used multiple agents such as Llama, chatGPT, and Falcon to produce an optimal answer.
- Used web sockets to stream the final answer within 4 seconds of the question.

#### **Twitter Emotion Sentiment Analysis**

November - December 2023

- Used BERT to classify the emotions conveyed within a dataset of tweets.
- Classified emotions such as happiness, sadness, fear, and disgust with a testing accuracy of 91%.

#### Language Classifier October 2023

- Used Recurrent Neural Networks to classify what language a sequence of text belongs to.
- Achieved a 71% accuracy across 18 languages.

### **Skills**

Libraries: FastAPI, Pytest, Pytorch, Pandas, Scikit-Learn, Temporal, TensorFLow, Matplotlib, React, SciPy

**Languages:** Python, C, C++, Java, Javascript, Go, Kotlin, SQL, Scheme, MATLAB Platforms: Docker, Github, Kubernetes, MongoDB, Linux/Unix, AWS, Spark

Soft Skills: Leadership, Communication, Teamwork, Problem Solving, Critical Thinking, Adaptability