Ejaz Ahamed Shaik

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Education

North Carolina State University, Raleigh, NC   August 2023 - December 2024
Master of Computer Science   *GPA: 4.0/4.0*
Courses: Design and Analysis of Algorithms, Automated Learning and Data Analysis, Software Engineering, Computer and Network Security, Neural Networks, Independent Study on Optimizing Code Generation for Large Language Models.
Future courses: AI, Generative AI for SE, Computer Architecture, Human-Computer Interaction, Computer Graphics.

National Institute of Technology, Allahabad, India   July 2016 - May 2020
Bachelors of Technology in ECE   *GPA: 8.7/10*
Courses: Computer Programming, Data Structures and Operating Systems, Networks and Systems, Computer Architecture, Software Project Management, Machine Learning, Advanced Digital and Image Processing, Database Management.

Skills

Programming Languages: Java, C/C++, Python, SQL, Golang, HTML, CSS, PHP, JavaScript, Bash.
Databases and Operating Systems: PostgreSQL, MySQL, MongoDB, Linux, macOS, Windows, Ubuntu, CentOS.
Tools/Frameworks: Spring boot, RabbitMQ, Apache Kafka, Splunk, Git, Linux, Docker, CI/CD, Blockchain, Tensorflow, CNN, NLP, Rest API, Jenkins, Maven/Gradle, Uipath, Automation Anywhere, Tableau, Streamlit, NPM, NodeJS, devOps, ReactJS, GPT-3 API, Kubernetes, Redis, Openshift, LangChain, Faiss, LLM, Gradio.

Professional Experience (3 years)

Senior Software Engineer, *Ultimate Kronos Group, India*   June 2022 - July 2023
- Implemented an end-to-end messaging framework with configurable parameterization for RabbitMQ, Kafka, and Pub/Sub. Orchestrated a seamless code-to-container pipeline leveraging Jenkins, Github webhooks and OpenShift.
- Key member of 3 person team automating daily monitoring of RabbitMQ, Redis, Ppas microservices, saving about 7.5K person-days/year through Splunk queries, Python scripts and UIpath.
- Achieved a **25%** reduction in operational costs by optimizing messaging framework, eliminating MuleSoft dependency and engineered a **40%** efficiency boost in Microsoft SQI Server data processing.

Software Engineer, *Ultimate Kronos Group, India*   August 2020 - June 2022
- Upgraded messaging framework to enhance RabbitMQ resilience by **30%** through a shift to quorum queue model.
- Enhanced security post UKG Ransomware attack, Implemented robust password policies and advanced security features in the legacy ecosystem.

Intern, *D.R.D.O, India*   May 2018 - July 2018
- Engaged in a comprehensive exploration of Real-Time Operating Systems (R.T.O.S) under the mentorship of Dr. Ajay Rathee, SC-'E'. Gained hands-on experience by immersing in diverse R.T.O.S concepts, effectively implementing them using Amazon's FreeRTOS. Skills: C/C++, R.T.O.S, Microprocessors, Operating Systems.

Projects

SEEDGuard.AI   *Python, Tensorflow, Pytorch, Generative AI, LLM*
- Lead developer at SEEDGuard.AI, an open source project, aiming to create a world where Artificial Intelligence is as knowledgeable and skilled as the best software engineers.
- Actively involved in implementing an innovative approach collaborating with professor, Dr. Bowen Xu, to enhance the accuracy of datasets used for training Language Models, specifically focusing on generating code.

Retrieval Augmented Generation (RAG)   *Python, LangChain, LLM, PostgresSQL, Gradio, FAISS*
- Developed an end to end approach, transforming documents into vector embedding, storing them on PostgreSQL and developed retrieval chains to retrieve context and history embeddings of conversation based on the user input.
- Used Gradio for user chat interface. Deployed this application on hugging face (ez7051-rag.hf.space).

Crypto Transfer   *Python, Cryptography, Socket Programming, Scripting*
- Successfully implemented a secure file transfer system, incorporating cryptographic techniques such as AES encryption in Galois Counter Mode (AES-GCM), Diffie-Hellman key exchange, and protection against on-path attacks.

A New Mask R-CNN Based Method for Improved Landslide Detection   *Python, Tensorflow, CNN, Object detection*
- Developed an innovative approach for landslide detection harnessing the power of Mask R-CNN's pixel-based segmentation with transfer learning to identify object layouts (https://ieeexplore.ieee.org/document/9373966)