Rizwan Syed

716-994-6646 | syedsrizwansr@gmail.com | linkedin.com/in/rizwan-syed-79b798211 | github.com/Riz777-star |
riz777-star.github.io/Portfolio

EDUCATION

University at Buffalo, State University Of New York	New York, USA
Masters of Science - Computer and Information Science	*Aug. 2023 – Dec 2024*
Sathyabama University	Chennai, India
Bachelor of Technology - Computer Science	*Jun 2019 – May 2023*

EXPERIENCE

Research Assistant — Jan 2024 – Sept 2024
University at Buffalo — *New York, USA*
- Led the optimization of GPT-2 for enhanced energy efficiency of large language models using quantization, distillation, and low-rank factorization, achieving a 45.2% reduction in CO_2 emissions while balancing model accuracy and performance.
- Implemented **Post Training Quantization (PTQ)**, reducing model size and memory footprint with 6% increase in perplexity, enhancing computational efficiency for deployment on resource-constrained devices.
- Utilized Python libraries like **TensorFlow, PyTorch, Hugging Face Transformers, and CodeCarbon** to track energy consumption and emissions.
- Conducted code analysis, debugging, and optimizations to ensure smooth system performance, while simultaneously **mentoring 3 junior team members** on research methodologies and development practices, resulting in on-time delivery.

Software Developer Intern — Feb 2023 – Aug 2023
Dell Technologies Inc — *Chennai, India*
- Developed a multi-user Asset Management web application to track the inventory for Dell products within the university and also handle data entry by multiple users.
- Engineered a responsive UI using Bootstrap, enhancing user experience, increasing mobile user engagement by 40%, and ensuring **SEO-friendly** design through accessibility and performance optimizations.
- Boosted the platform's performance by **fine-tuning database queries** and enhancing server-side components, resulting in a 20% decrease in page load times, improving **SEO** Core Web Vitals and search ranking potential.

Software Developer — Jun 2022 – May 2023
Vaya Group — *Hyderabad, India*
- Designed and implemented a microservices-based architecture using Java, Spring Boot, and Hibernate to create a supplier onboarding form, enabling suppliers to provide comprehensive product details and streamlining B2B procurement process.
- **Engineered a high-performance file retrieval system** processing **over 1 million supplier documents**, reducing search latency by 40% and eliminating redundant queries through efficient indexing strategies.
- Built and integrated **RESTful** web services using **JAX-RS and JAX-WS**, improving service communication efficiency by 25% while enhancing overall system performance through optimized database queries and design patterns.
- Streamlined **CI/CD pipelines** with Jenkins, reducing deployment time by 35% and enabling more frequent releases, while maintaining system stability throughout the project lifecycle.
- Collaborated closely with a cross-functional team of designers, front-end developers, and QA engineers to conceptualize and implement the platform's user interface using AngularJS.This resulted in an intuitive and visually appealing user experience.
- Led full **SDLC** from requirement gathering, design, and testing to deployment for high-quality **Java** applications, achieving a **98% on-time delivery rate** and consistently meeting client expectations, while participating in retrospective sessions as part of an **Agile** development team.

TECHNICAL SKILLS

Languages: Java, Python, JavaScript, TypeScript, SQL, C++, HTML, CSS, JSON, GraphQL, XML,Php, C.
Frameworks: React JS, Spring boot, PyTorch, CDK, Redux, NodeJS, GitHub, Bootstrap, Vue, React, Model-View-Controller.
Database Cloud: MySQL, MongoDB, SQL Server, NoSQL, PostgreSQL, Hadoop, AWS.
Tools: Git, Selenium, PyCharm, WordPress , Visual Studio, Duda, Linux, GDB, REST API, Kubernetes, Dynatrace, LaTeX.
Certifications: **AWS Solutions Architect Associate**, Certified Angular Developer, Certified Business app Creator with Zoho.

PROJECTS

Relational Database Engine (Taco-DB)
- Architected a high-performance DBMS using C++ and POSIX I/O for efficient data storage and retrieval, optimizing I/O performance. Created an efficient data layout system to streamline storage and enhance query execution speed. Enforced single-table query processing algorithms and B-tree indexing to accelerate data retrieval and improve search efficiency. Developed join algorithms and optimized query execution plans, reducing multi-table query times and improving system scalability. Used Google Test and GDB for testing and debugging, ensuring robust functionality and system stability.

Online Electronic Store using Angular
- Built and maintained an e-commerce platform with inventory management and purchasing capabilities, utilizing AngularJS, MVC frameworks, Java, JavaScript, and Selenium. Refined performance by implementing NgRx state management, lazy loading, and efficient APIs, while integrating JWT authentication, fraud detection, and encryption to ensure a secure **user experience**. These enhancements led to a **20% increase in website traffic** and improved user engagement.

Facial Mask Detection using Machine Learning
- Leveraged an AI-powered surveillance system for real-time face mask detection and social distancing compliance using CNN, YOLOv3, and OpenCV. Integrated the system with existing CCTV networks for large-scale monitoring and live streaming, featuring automated alert mechanism to enhance public safety. Deployed solution on Heroku for scalable cloud-based access.