AKSHATA VIJAY KULKARNI

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PROFESSIONAL GOAL

Software Engineer with a Master's in Computer Software Engineering and proficiency in Java, Python, SQL, and JavaScript. Experienced in object-oriented programming, enterprise development, and cloud solutions. Passionate about building scalable applications, troubleshooting technical challenges, and optimizing software performance for business impact.

WORK EXPERIENCE

Senior Software Engineer   **November 2020 - December 2023**
Persistent Systems Ltd   **Pune, India**

- Developed a static analysis tool for **AWS** clients (CodeGuru Service), improving code quality & resolving security concerns by deploying AWS and Agile methodologies.
- Expanded tool's language support to include **Java, Python, Machine Learning, JavaScript, TypeScript, and C#**, increasing its usability across diverse projects.
- Led design and development of **TypeScript parser** to analyze source code, boosting productivity by 20%.
- **Managed CI/CD pipelines**, automating builds, testing, and deployment to ensure smooth software releases with adherence to **SDLC best practices.**
- Solved TimeOut Exception in **CloudWatch** logs, enhancing tool efficiency & reliability by 70% in 1 week.
- Built performance and memory tracking tools, reducing code defects by 30–70%.
- Enhanced tool accuracy to 85% by analyzing feedback in collaboration with benchmarking team.
- Orchestrated development of central database system leveraging **React, Amazon RDS, EC2, and S3**, enabling efficient performance tracking.
- **Trained Large Language Model (LLM)** using a custom dataset to automate code analysis, improving accuracy by 90%.
- Presented progress, resolved blockers, and drove conflict resolution during weekly status reviews.

TECHNICAL SKILLS

Programming Languages: Java, Python, SQL, JavaScript, TypeScript, C#.
Web Technologies: HTML, CSS, ReactJS, NextJS, Express, Bootstrap, JUnit, Angular.
Backend Development: NodeJS, Spring Boot, Fast API, REST API, Django, Flask.
Databases: MySQL, Firebase, MongoDB, PostgreSQL, DynamoDB, Cassandra.
AI/ML Frameworks: Large Language Models, TensorFlow, PyTorch, Keras, Scikit-Learn, Pandas, NumPy.
Software Development: OOP, Microservices, Data Structures, SDLC, Debugging, Code Reviews, Design Patterns.
Cloud & DevOps: AWS, Docker, Kubernetes, Ansible, CI/CD Pipelines, Linux, Jenkins.

EDUCATION

Master of Science in Computer Software Engineering   **December 2025**
Arizona State University (GPA: 3.89 /4.0)   **Tempe, AZ**

- **Relevant Coursework:** Advanced Data Structures, Mobile Systems, Software Verification, Validation & Testing, Software Project Process & Quality Management, Languages and Programming Paradigms, Semantic Web Engineering, Data Processing at Scale.

Bachelor of Engineering in Computer   **May 2020**
Savitribai Phule Pune University (GPA: 3.8 /4.0)   **Pune, India**

- **Relevant Coursework:** Artificial Intelligence, Machine Learning, Data Mining & Warehousing, Database Management Systems, Object Oriented Programming, Computer Networks, System Programming & Operating Systems, Information & Cyber Security.

PROJECTS

Expo - Emergency Operations Center Application   **December 2024 - Present**
Real-time operations center for natural disasters   **Tempe, AZ**

- Associated with a team to build a cross-platform disaster response app (**Web, Android, iOS**) using **React, Node.js, Express.js,** and **SQLite**, reducing report management time by 40%.
- Spearheaded development of functionalities for submitting, saving, and exporting reports, collaborating with team to enable efficient tracking of over 500 emergency incidents.

Smart Habitat Ranking for Urban Relocation   **September 2024 - December 2024**
Dataset with Integrated Ontology with habitat index   **Tempe, AZ**

- Developed a web platform using **React.js, Spring Boot, and GraphDB** to rank communities for urban relocation based on environmental and crime data to host on the **Azure** platform (https://purple-mushroom-050a3aa1e.4.azurestaticapps.net/).
- Analyzed 10,000+ records showcasing innovative data integration and counting algorithms. Achieved 91.7% user satisfaction with personalized recommendations and rapid data retrieval.