SURAJ RAGHU KUMAR

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SOFTWARE DEVELOPMENT ENGINEER | FULL-STACK DEVELOPER | CLOUD & ALGORITHM OPTIMIZATION EXPERT

Results-driven Software Engineer with over 2 years of professional experience at SAP, specializing in full-stack development, algorithm optimization, and cloud integration. Proficient in programming languages, including Python, Java, C, C++, ABAP, Ruby, and JavaScript. Demonstrated expertise in debugging, problem-solving, service processes, IT service, and enhancing application performance, with a proven track record of reducing customer incident reports by 45% through issue resolution. Skilled in implementing efficient data structures to optimize performance and developing full-stack Android applications with real-time data synchronization. Seeking a Software Development Engineer role to leverage technical expertise and drive innovative solutions in a dynamic environment.

CORE EXPERTISE

Full-Stack Development (Backend & Frontend) | Debugging & Performance Tuning | Cloud Computing | Microservices Architecture & Deployment | Software Designs | Database Migration | AWS Cloud Architecture | CI/CD Pipelines | REST API Development | Data Structures & Internal Systems Design | Database Management | Real Time Monitoring | Agile Software Development | Scalable System Architecture | Service Management | API Troubleshooting & Integration | Technical Documentation | Root Cause Analysis

Technical Skills:

Languages and Tools: Python, Java, C, C++, Ruby, SQL, Typescript, Bash, Git, JIRA, ServiceNow, Docker, Kubernetes, GitHub, Gitlab, ServiceNow | **Databases:** MySQL, MongoDB, Google Firebase, SAP HANA, PostgreSQL | **AWS Services:** Lambda, EC2, S3, RDS, DynamoDB, CloudFormation, API Gateway, IAM, CloudWatch | **other:** XML, Node.js, React.js, Angular, Spring Boot, HTML, Tailwind CSS, RESTful API, PythonTkinter, Flask, Pandas, NumPy, Django, Express.js, Linux/Unix, Windows, macOS

PROFESSIONAL EXPERIENCE

SOFTWARE ENGINEER (SUPPORT AND DEVELOPMENT) | SAP – BENGALURU, KARNATAKA, INDIA   JULY 2021 – JULY 2023

Reduced customer incident reports by 45% by publishing SAP Knowledge Base Articles (KBA), documenting root cause analysis, and proactively addressing recurring issues to improve internal knowledge sharing and knowledge management.

- Enabled 300+ SAP customers to resolve database inconsistencies by developing ABAP automation reports with the AIS team, significantly reducing manual effort by over 70% and improving data integrity.
- Improved SAP system stability by debugging and resolving critical Business Partner and Master Data Framework issues, optimizing system performance across Application Platform and Logistics components.
- Cut manual debugging code effort by 40% and reduced issue resolution time by 25% by designing a full-stack internal tool with Python (backend) and React.js (frontend frameworks) to automate SAP note detection.
- Optimized data archiving and storage processes by integrating SAP systems with AWS services (S3, Storage Gateway), while leading debugging sessions to resolve high-priority system incidents.

SOFTWARE DEVELOPMENT INTERN | TEQUED LABS – BENGALURU, KARNATAKA, INDIA   JULY 2019 – AUGUST 2019

Reduced search times by 50% in the "ShopEase" Android e-commerce app by optimizing data processing algorithms using hash data structures, enhancing app performance in the development standards phase.

- Developed full-stack Android applications in Android Studio, implementing backend logic in Java and frontend UI in XML while integrating NoSQL databases (Firebase Realtime Database, MongoDB) for real-time data synchronization.
- Accelerated release cycles by automating build and deployment processes, utilizing Git for version control, and implementing CI/CD pipelines to streamline software testing and delivery.

KEY PROJECTS

Microservices Transition: Monolithic to Scalable Microservices on AWS | Technologies: *Node.js, AWS (ECS, ECR, ALB, EC2), Docker, REST APIs, Microservices, Load Balancing*

- Improved scalability and fault tolerance by transitioning a Node.js monolithic application to microservices on AWS, leveraging Docker for containerization, ECR for image storage, and ECS for efficient deployment.
- Enhanced system performance and availability by implementing path-based routing with ALB, designing ECS task definitions for modular microservices, and conducting end-to-end API testing to ensure reliability.

Full Stack Android Quiz Application with Efficient Question Allotment Algorithm | Technologies: *Java, Android Studio, XML, Firebase (Authentication, Realtime Database), Data Structures*

- Developed a full-stack Android Quiz Application with Firebase Authentication, real-time database storage, and an optimized question allocation algorithm using HashMaps and Queues to prevent repetition and enhance user experience.

Full Stack Food Delivery App - Foodie | Technologies: *MongoDB, Express.js, React.js, Node.js, JSON Web Tokens (JWT)*

- Built a full-stack food delivery web application using the MERN stack, implementing user and admin roles, MongoDB for dynamic data management, JWT for secure authentication, Express and Node.js for backend APIs, and a responsive React frontend.

EDUCATION

Master of Science, Computer Science | North Carolina State University, Raleigh, NC (GPA: 4.0, Graduated May 2025)

Bachelor of Science in Engineering, Major - Computer Science | JSS Science and Technology University, Mysuru, Karnataka, India - 2021

TRAINING & CERTIFICATIONS

AWS Certified Solutions Architect Associate | Amazon Web Services, Aug 2024 – Aug 2027

AWS Certified Cloud Practitioner | Amazon Web Services, Aug 2024 – Aug 2027