Rahul Podugu

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SUMMARY

Software Engineer with over 2 years of experience in developing AI-driven solutions, scalable distributed systems, and efficient software architectures. Proficient in object-oriented design and cloud technologies to create impactful, user-centric applications. Strong foundation in algorithms, data structures, and system design, with a proven passion for innovation and collaboration. Dedicated to continuous learning and the application of emerging technologies to solve complex technical challenges.

EXPERIENCE

- **Software Developer Research Assistant** — UMBC
  Aug 2022 – Present — *Baltimore, MD*
  - **Advanced UI Engineering**: Developed and maintained a high-performance, responsive user interface using Angular, HTML5, and CSS3; implemented server-side rendering with Angular Universal to reduce initial load times.
  - **Scalable Backend Architecture & Security**: Designed and deployed secure Node.js microservices with RESTful and GraphQL APIs using Docker/Kubernetes, Redis caching, and JWT authentication; implemented real-time monitoring via an ELK stack to ensure optimal performance under high-traffic conditions.

- **Software Developer** — UST
  Sept 2021 – Jun 2022 — *Bangalore, India*
  - **Payment Module Development**: Led development of a payment module using Kafka for event streaming, Java for core processing, and Saga orchestration for managing distributed transactions, ensuring system reliability and data consistency.
  - **Microservices Architecture**: Implemented a microservices framework using Spring Boot to enhance scalability and modularity; streamlined REST API integrations for efficient data exchange.
  - **Accuracy Improvement**: Achieved a 25% increase in inventory accuracy through the integration of robust REST APIs.
  - **Automated Testing**: Established automated testing with Selenium, JUnit, and Mockito in a TDD environment, reducing manual testing efforts by 75% and boosting productivity by 20%.
  - **Agile Methodologies**: Adopted Agile practices to shorten release cycles and accelerate time-to-market by 30%, enhancing overall team efficiency by 25%.

- **Analyst Intern** — Fidelity National Financial
  Apr 2021 – Aug 2021 — *Bangalore, India*
  - **Data Conversion & Cloud Migration**: Contributed to cloud migration projects by resolving Java and SQL bugs; improved data quality by 50% and reduced error rates by 25%.
  - **Data Extraction**: Developed a Java-based data extraction tool that reduced extraction time by 30%.
  - **Performance Enhancement**: Optimized application performance by refining Java code and Hibernate configurations, reducing system crashes by 40% and improving response times by 25%.
  - **CI/CD Implementation**: Implemented CI/CD pipelines using Jenkins, Docker, Kubernetes, and YAML, cutting deployment time by 20% and streamlining release processes.

SKILLS SUMMARY

- **Programming Languages**: JavaScript, TypeScript, C, C++, C#, Python, Java, Kotlin
- **Web Development**: Angular, Spring Boot, REST APIs, HTML5, CSS3, jQuery, SOAP-XML, Node.js
- **Quality Assurance**: Selenium, TestNG, TDD, BDD, JUnit, Cucumber, Postman
- **Data Management & Analysis**: PostgreSQL, SQL, Oracle, MongoDB, Data Analysis, Kafka
- **Agile Development**: Scrum, Kanban, SDLC, Jira, Git
- **Tools & Frameworks**: Docker, Kubernetes, Azure, AWS, Maven, Hibernate, Jenkins, React.js, AJAX

PROJECTS

- **Scalable Distributed Analytics Platform**: Designed and implemented a distributed analytics platform to process and analyze large volumes of real-time data. Leveraged a microservices architecture with Apache Kafka for data streaming and Apache Spark for parallel data processing. Employed distributed consensus algorithms for fault tolerance and load balancing, ensuring high availability and scalability in a cloud environment. **Tech**: Apache Kafka, Apache Spark, Docker, Kubernetes, AWS.

- **Decentralized Secure File Sharing System**: Engineered a high-performance decentralized secure file sharing system that outperformed benchmarks by over 3x. Implemented RSA encryption to secure data and demonstrated expertise in distributed systems on a Linux platform. Enhanced system resilience with dynamic node discovery and automated fault recovery mechanisms. **Tech**: Java, RSA, Linux, Distributed Systems.

EDUCATION

- **University of Maryland Baltimore County** — Baltimore, MD, USA
  Master of Science in Computer Science — *Aug 2022 – May 2024*
- **Amrita Vishwa Vidyapeetham University** — Kollam, India
  Bachelor of Engineering in Computer Science — *Jul 2017 – Jul 2021*

PUBLICATIONS

- **Remote Medical Assistance for Marine Fishermen through OceanNet**: Presented at the 2021 12th International Conference on Computing Communication and Networking Technologies (ICCCNT), Kharagpur, India, pp. 1–5. doi:10.1109/ICCCNT51525.2021.9579678