

Royston Fernandes

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EDUCATION

Arizona State University

Master of Science in Computer Science, GPA:4.00

Tempe, AZ

August 2024 – May 2026

Manipal Institute of Technology

Bachelor of Technology in Information Technology under SAGES scholarship, GPA:3.46

Manipal, India

July 2018 – July 2022

EXPERIENCE

Software Engineer Intern

ASM America Inc.

May 2024 – Present

Phoenix, Arizona

- Collaborated with the Epitaxy team to design and implement advanced features for a proprietary software platform using C++ and Object Pascal, delivering enhanced functionality to both vendors and clients.
- Engineered robust deployment pipelines and configuration tools tailored to client-specific requirements, ensuring seamless integration and faster, error-free deployments.
- Spearheaded development of new scheduler system capabilities to improve real-time communication and synchronization between critical manufacturing equipment, and design a modular I/O interface to enable Virtual I/Os within the unified software architecture, effectively overcoming physical hardware constraints.
- Redesigned hardware communication drivers to significantly reduce latency, laying the foundation for horizontal scalability across emerging hardware systems.

Software Developer

July 2022 – June 2024

Gurgaon, India

BlackRock Inc.

- Designed and deployed microservices using Spring and Hibernate to automate offer settlements across multiple financial products, improved operational efficiency by 35%.
- Optimized database interactions and implemented Apache Ignite caching to reduce system latency, enhancing overall application performance.
- Created a risk-based capital calculator for client portfolios using React, Spring, and internal dashboard tools, enabling detailed financial risk analysis and serving 1,000+ clients with real-time insights to inform strategic portfolio decisions.
- Leveraged Apache Ignite events and internal messaging systems to cut ID query processing time by 15%, improving transaction speeds and user experience.
- Automated compliance enforcement for financial transactions with Bash scripts, reducing manual oversight by 80% and ensuring 100% adherence to regulatory policies.
- Collaborated with clients and cross-functional teams to rewrite complex loan allocation algorithms in Spring, and integrated a robust API for seamless cloud deployment, ensuring scalable performance across various environments.
- Validated system functionality with comprehensive testing (JUnit, Cucumber), employing behavior-driven development (BDD) to boost test coverage by 10% across the codebase.
- Led an initiative to scale microservices to a multi-instance architecture using Apache Zookeeper for leader election, improving throughput and resiliency by 24%.

Software Developer Intern

January 2022 – July 2022

Gurgaon, India

BlackRock Inc.

- Researched and compared Redis vs. Apache Ignite for distributed caching in a microservices architecture to evaluate performance trade-offs and inform caching strategy.
- Developed a Spring Boot microservice with Hibernate to load data into cache nodes and visualized key metrics on a Grafana dashboard (via Prometheus), demonstrating Redis's potential to reduce data retrieval time by 15%.
- Partnered with senior developers on practical Redis integration examples, showcasing reduced application throughput time and improved efficiency in a large-scale distributed system.

Data Science Intern

June 2021 – August 2021

Bangalore, India

247.ai

- Developed a machine learning model to predict customer wait times on hotline calls in real-time, aiming to improve customer experience by managing expectations and reducing perceived wait frustration.
- Visualized model results using Microsoft Power BI and integrated the model into a demo system, highlighting a potential 18% increase in revenue through improved user satisfaction.

TECHNICAL SKILLS

Languages: C++, C, C#, Java, HTML, CSS, JavaScript, Python, Object Pascal, SQL, PHP, Kotlin

Frameworks: Spring, Maven, React, Node.js, Hibernate, Apache Ignite, JUnit, Flutter, Redis, MongoDB, Cucumber, Mockito, PostgreSQL, UNIX, Elasticsearch

Developer Tools: Git, Docker, Microsoft Azure, IntelliJ, Delphi, Postman, Grafana, Microsoft Power BI