Sudarshanan

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PROFILE

Master of IT student at RMIT with nearly 3 years of experience as a Software Engineer, specializing in Python automation, CI/CD, and large-scale system testing. Skilled in data structures, algorithms, and Linux systems. Passionate about AI/ML and eager to build scalable, intelligent solutions that deliver real-world impact, blending hands-on engineering experience with academic rigor to contribute as a Summer 2025 Software Engineering Intern at Microsoft.

SKILLS

Languages: Python, Java, SQL, Shell Scripting
DevOps: Git, GitHub, CI/CD, Jenkins, Jira, OpenStack, VMware ESXi, Unix/Linux
AI/ML: TensorFlow, PyTorch, Scikit-Learn, NumPy, Pandas, SciPy, Matplotlib, Seaborn
Certification: Certified: Azure AI Fundamentals (2025)

EDUCATION

RMIT University July 2024 – July 2026
Master of Information Technology (Specialization: Intelligent Systems)

- **Relevant Coursework:** Algorithms and Analysis, Advanced Programming, Database Concepts, Software Engineering, Practical Data Science with Python, Machine Learning, Artificial Intelligence, Deep Learning, Semi-Structed un-structed data, Software Engineering Project Management

St. Joseph's College of Engineering August 2017 – May 2021
Bachelor of Engineering in Electronics and Communication

- **CGPA:** 9.03/10 | **Rank:** 24/15,000 | **Placement Co-ordinator | Relevant Coursework:** Problem Solving & Python Programming, Data Structures in C, OOP, Communication Networks

WORK EXPERIENCE

Ribbon Communications Inc August 2021 – June 2024
Software Engineer →Senior Software Engineer Bangalore, India

- Built a Python-based test automation framework and a CLI configuration tool for the integrated Google Voice and Ribbon Session Border Controller solution, improving test efficiency by 50% and simplifying enterprise deployment.
- Automated end-to-end testing of Ribbon Session Border Controllers using REST APIs and real VoIP devices, ensuring seamless interoperability with platforms like Google Voice, BroadSoft, and Nice Server - resulting in a 40% increase in test coverage.
- Developed Python and Shell scripts for task automation, defect resolution, and deployment/upgrade of Ribbon Session Border Controllers on cloud platforms, integrating test suites into CI/CD pipelines with Jenkins and Groovy.
- Collaborated with cross-functional teams across time zones to deliver large-scale, carrier-grade telecom solutions, contributing to strategic automation initiatives and reducing defect resolution time by 25%.

RELEVANT PROJECTS

Reinforcement Learning-Based QoS Packet Scheduler | Python, OpenAI Gym, NumPy, Matplotlib

- Created a custom OpenAI Gym environment that models a three-queue, QoS-aware router, capturing queue lengths, delay violations, and rolling delays for real-time scheduling decisions
- Implemented and tuned a tabular Q-learning agent with ε-greedy exploration and reward shaping to meet strict delay targets for video/voice traffic while fairly serving best-effort packets
- Benchmarked the RL scheduler against FIFO, EDF, and sequential-priority baselines across scenarios with and without switch penalties, showing better delay balancing and adaptability to bursty loads.

Event Booking System | Java, JavaFX, SQLite, Design Patterns, JUnit

- Built a full-featured JavaFX application that supports user sign-up/login, event browsing, ticket booking with seat validation, and order export functionality.
- Implemented a layered architecture (MVC) with SQLite-backed DAOs and service classes, employing Singleton, Factory, and Result wrapper patterns plus SHA-256 password encryption to enhance maintainability and security.
- Created an admin interface for managing events (add/modify/delete/disable) and viewing system-wide orders, supported by comprehensive JUnit tests.