Swarom Saurabh Muley

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Education

Santa Clara University   **Sep. 2023 – June 2025**
Master of Science in Computer Science & Engineering (GPA - 3.7)   *Santa Clara, CA*

Vishwakarma Institute of Technology   **Aug. 2019 – May 2023**
Bachelor of Technology in Computer Engineering (GPA - 8.9)   *Pune, MH*

Relevant Coursework

- Data Structures
- Machine Learning
- Compiler Design
- Operating Systems
- Artificial Intelligence
- Data Science
- Database Management
- Internet of Things
- System Software
- Web Technologies
- Computer Networks
- Algorithms

Professional Experience

Johnson Controls International   **Aug. 2022 – June 2023**
Site Reliability Engineer Intern   *Pune, MH*

- Engineered a streamlined system to automate VPN access provisioning for the entire engineering organization, and seamlessly integrated it with Jira.
- Eliminated the need for manual intervention by designing a fully automated solution that handled both VPN provisioning and access removal, in addition to providing real-time status updates through email notifications using SendGrid API.
- Demonstrated efficiency as the system successfully processed thousands of VPN access requests each month, while also swiftly addressing and resolving over 5,000 Jira tickets within a short timeframe.
- Recognized for contributions to the project during the SRE all-hands meeting, highlighting the impact and effectiveness of the automated system in improving workflow and productivity.
- Contributed to a team effort in implementing MLOps practices to train a machine learning model on thousands of hourly-generated infrastructure health tickets, facilitating automated self-healing based on categorized recurring issues.
- Automated SAAS token renewal and updates within Azure App Service across 10+ regions and environments. The system executed updates in live, operational environments and incorporated comprehensive error-handling mechanisms.
- Led Knowledge Transfer sessions for new engineers on managing and enhancing systems I developed, ensuring a smooth transition and continued operational excellence.

Projects

IoT System, Smart Fridge | *C, Python, OpenCV, AWS, Raspberry Pi, ARM, IoT, Swift, SwiftUI*   **Feb. 2024**

- Collaborating on engineering an emerging Smart Fridge IoT system with Raspberry Pi, utilizing OpenCV for image analysis techniques.
- Driving AWS integration for data analysis, aiming for precision in food item detection.
- Crafting a complementary iOS app with Swift and SwiftUI for mobile access to fridge inventory, notifications, and analytics, enhancing the Smart Fridge IoT system's user interface and accessibility.
- Implementing a notification system leveraging predictive analytics to alert users about inventory status and item expirations.

iOS App, Brooklyn GRE & SAT Preparation | *Swift, Python, SwiftUI, UIKit, Go, AWS, DynamoDB*   **April 2022**
Link - *https://apps.apple.com/in/app/brooklyn-gre-sat-preparation/id1620017367*

- Built an educational platform using Swift and Go, with backend deployment on AWS Fargate for secure, scalable access.
- Employed SwiftUI and UIKit for UI, Swift.SQLite for data storage, and MixPanel for analytics.

iOS App, Thaleia Music Updates | *Swift, Python, SwiftUI, Spotify-API, AWS SNS, MongoDB*   **Aug. 2021**
Link - *https://apps.apple.com/in/app/thaleia/id1581369776*

- Created a music-tracking iOS application with an event-driven microservices architecture, utilizing Python automation and the Spotify API to deliver real-time music updates.
- Configured automated scheduling via AWS CloudWatch and remote notifications through AWS Pinpoint.

Deep Learning Agent, TD-Gammon | *Python, PyTorch, NumPy, Deep Learning, RL*   **Mar. 2021**
Link - *https://github.com/OneUpWallStreet/TD-Gammon*

- Reimplemented TD Gammon (G. Tesauro, 1995) using PyTorch, enabling a self-play reinforcement learning agent to achieve superhuman performance in Backgammon.
- Constructed the Backgammon engine from the ground up using Python, meticulously training the agent through an extensive dataset of over 300,000 self-play games.
- Designed intuitive win probability graphs and a user-friendly "move probability" interface using Matplotlib.

Technical Skills

Languages: Python, Swift, Go, C++, C, Java, JavaScript, Typescript, SQL, HTML/CSS, Bash, PowerShell
Frameworks/Tools: AWS, Linux, Docker, Microsoft Azure, Jenkins, Kubernetes, GCP, CI/CD, Terraform, Ansible
Misc: MySQL, NoSQL, AWS S3, Redis, REST-API, Jira API, JQL, GitHub, MongoDB, DataDog, IoT, DevOps