SAWAN CHAKRABORTY

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EDUCATION

Master's in Computer Science & Engineering (MS CS)   **April 2023 - March 2025**

Santa Clara University — GPA: 3.9/4.0   *Santa Clara, California*

Relevant Coursework: Distributed Systems, Object Oriented Design, Programming Algorithms, Machine Learning

Bachelor's in Computer Science & Engineering (BS CS)   **August 2017 - June 2021**

Visvesvaraya Technological University — GPA: 4.0/4.0   *Bangalore, India*

Relevant Coursework: Data Structures, Computer Architecture, Software Engineering, Computer Networking

TECHNICAL SKILLS

Languages	Java, Python, JavaScript, C++, Shell Scripting, Android
Web Technologies	HTML5, CSS3, Bootstrap, React, JSON, REST APIs, SOAP APIs, NodeJS, Flask, Streamlit
Databases	MySQL, SQLite, MongoDB, Redis, Hadoop, Firebase, Spark
Tools & Platforms	Git, Maven, Gradle, Jenkins, JIRA, CI/CD, Spring, Splunk, Docker, Kafka, Linux, JUnit, Selenium

EXPERIENCE

Caltrain   **June 2024 - Present**

Software Engineering Intern | Python, Tableau, Power BI, Wireshark, Git, Nmap, Agile   *San Carlos, CA*

- Led the enhancement of Positive Train Control (PTC) technology, increasing system efficiency by 25% and reliability by 30%, while contributing to the Caltrain ITCM High-Level Design.
- Worked with the cybersecurity team, using Wireshark, Nmap, and Python to analyze TCP dump data, automating detection of affected ports and protocols, reducing analysis time by 40% for over 50 stakeholders.

SCU Frugal Innovation Hub   **April 2024 - June 2024**

Software Engineer | Node.js, JavaScript, TypeScript, Git, Kotlin, Docker, Android   *Santa Clara, CA*

- Developed 'Equation2Success' anti-bullying app using Android, boosting user engagement by 30% with a user-friendly interface and ticketing system. Implemented SSO integration via OAuth 2.0, increasing app adoption by 25%.

Accenture   **July 2021 - June 2022**

Software Development Engineer | Java, JDBC, REST API, Spring, MySQL, Maven, Git   *Bangalore, India*

- Developed and deployed new RESTful APIs using Java, automating 70% of manual functionalities and enhancing the Dyson Europe website's UX, leading to a 50% improvement in performance and user engagement.
- Integrated data quality checks against SQL Injection and cross-scripting, managing 200+ data sources, enhancing data integrity by 90%. Overall efforts improved efficiency and user ratings for 400,000 users, fostering business growth.

Kigyan Techno Solutions   **March 2021 - April 2021**

Software Engineering Intern | Android, Firebase, REST API, SQLite, Splunk   *Bangalore, India*

- Launched "Retail Promotion Planning" module with video streaming on Android, increasing user engagement by 50% and attracting 10000 new users in 3 months. Optimized code by analyzing app logs which reduced crashes by 40%.

ACADEMIC PROJECTS

Digital Wallet | *Java, REST API, MongoDB, AWS, Maven, JSON, Postman*

- Engineered a Digital Wallet platform with Java backend and MongoDB for secure storage of IDs, bank accounts, and logins. Designed REST APIs for CRUD operations, tested APIs with Postman, achieving 40% reduction in server response time.

COVID-19 Live Tracker Dashboard | *Java, REST API, HTML5, CSS, JavaScript, Bootstrap, AWS*

- Created real-time COVID-19 Live Tracker Dashboard, utilizing Java, REST API, HTML5, CSS and Bootstrap, attracting 100+ monthly users. Deployed the full-stack app on AWS to handle traffic spikes during peak pandemic periods.

ParkShare – Optimize & Earn from Your Parking Spot | *Java, Android, REST API, Firebase, SQLite*

- Developed an Android app for monetizing underutilized parking spaces, enabling providers to rent slots and users to find parking, reducing search time by 50% for 70+ users. Integrated Firebase for backend API services.

Fraud Prediction System | *Python, TensorFlow, Pandas, Isolation Forest, Local Outlier Factor, Streamlit, Heroku*

- Developed an ML app to predict credit card fraud using PCA-transformed data with Python and Pandas, reducing dimensions by 45%. Built a TensorFlow neural network, fine-tuned to 97% accuracy, and created a website to display results.

ACHIEVEMENTS & AWARDS

- Conceptualized and published 3 Android apps on the Google Play Store.
- Winner of Karnataka State Council(IISc) sponsorship for "COVID-19 Face Mask Detector" project.