Sayed Amin Resume

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Work Experience

Financial Software & Systems — April 2024 – Present

Software Engineer — *Mumbai*

- Designed, developed, and integrated **secure NPCI APIs** into the DCMS project, deploying a **RESTful API** for external providers with **encryption and authentication mechanisms**, ensuring seamless payment processing, data integrity, and regulatory compliance.
- Developed a **common CAF framework** for all card-related operations, enabling smooth integration of multiple banks into the DCMS application and reducing onboarding time.
- Successfully integrated **SBI, CGGB, KVB, and IDFC Bank** into the DCMS application by aligning their specific requirements with our **Integrator and CAF framework**, ensuring compatibility and scalability.
- Led the **bank integration process** by analyzing diverse banking requirements and standardizing them within our DCMS architecture, improving operational efficiency.
- Designed and implemented **Java 17, Spring Boot 3, and microservices-based scalable APIs**, optimizing system performance to onboard **5 lakh customers per hour** with end-to-end success.
- Contributed to one of the **largest banking applications**, handling **30–40 lakh transactions per day**, reinforcing system stability and performance for major financial institutions.

AlgoUniversity (backed by Y-Combinator) — Aug 2023 – April 2024

Software Development Contractor — *Remote* | ***Source Code*** | ***Live link***

- Designed and developed a **secure online code execution platform** that remotely compiles and judges user-submitted code for programming problems, ensuring correctness and efficiency.
- Enhanced **user engagement** by implementing **code submission history and leaderboard tracking**, allowing users to monitor progress and improve performance.
- Strengthened platform **security** by integrating **Docker and sandboxing techniques**, preventing malicious code execution and ensuring a safe environment for users.
- Optimized **performance and scalability** by implementing a **Redis-based job queue with polling**, enabling efficient concurrent request handling and reducing execution time.
- Deployed the platform on **AWS EC2** for production, with a scalable architecture designed for future horizontal scaling using **Nginx**.
- Built the platform using **MERN stack**, incorporating **Vite for fast front-end builds** and **MUI for a modern UI**, ensuring a smooth and responsive user experience.

Philips — Sept 2022 – July 2023

Software Development Intern — *Bengaluru*

- Developed a **Python-based XML to JSON data conversion script**, optimizing legacy device data processing for **MRI, CT scan, and other medical devices**, improving data accessibility and integration.
- Implemented **role-based authentication (RBAC) in HashiCorp Vault** using **Java Spring Boot**, ensuring secure and controlled access to sensitive medical data.
- Engineered a **multi-threaded database migration solution**, reducing execution time significantly by enabling data migration even under system load and allowing automatic recovery from failure states.

Projects

Portfolio Website — Source Code | Live link

- Developed a **responsive and interactive portfolio website** using **Next.js 14, ReactJS, and Three.js**, providing a seamless user experience with smooth animations and 3D elements.
- Designed an **intuitive UI/UX** with **Tailwind CSS and Framer Motion**, ensuring modern aesthetics and fluid animations for enhanced visitor engagement.
- Integrated a **direct messaging feature**, allowing visitors to contact me effortlessly through the website, improving accessibility and networking opportunities.
- Deployed on **Vercel** with a **custom domain**, ensuring fast performance, scalability, and reliable hosting with automatic updates.

Smart Hydroponics System (AI-Driven Precision Aeroponics) — Research Paper

- Built an **AI-powered aeroponics system** integrating **deep learning and IoT sensors** to monitor and control plant growth, ensuring precise environmental adjustments.
- Created a **custom dataset from 27GB of plant images**, trained deep learning models for plant identification and health monitoring, and conducted model validation with comparative analysis.
- Engineered a **server-side application using Express.js and Node.js**, enabling real-time deep learning operations for automated plant care.
- Successfully cultivated **14 different plant varieties**, demonstrating the system's efficiency in optimizing plant health and growth through AI-driven automation.

Education

Veermata Jijabai Technological Institute, Mumbai **2021 - 2023**
M.Tech in Computer Engineering *8.25/10 CGPA*

M.H. Saboo Siddik College of Engineering, Mumbai **2016 - 2020**
B.Tech in Information Technology *7.18/10 CGPA*

Technical Skills

Languages: C, C++, Java, JavaScript, HTML, CSS
Backend: Spring Boot, Node.js, Express.js, REST APIs, Microservices, JUnit Testing, Socket.IO, GraphQL
Frontend: React, Next.js, TypeScript, Angular, React Native, TailwindCSS, Bootstrap, Material UI, Redux
Cloud & DevOps: AWS, Docker, Kubernetes, CI/CD Pipelines, Jenkins
Databases: PostgreSQL, MongoDB, MySQL, Redis (cache)
Developer Tools: Postman, VS Code, GitHub, Git, IntelliJ IDEA, Xcode
Coursework: Data Structures and Algorithms (DSA), OOP, Low-Level Design (LLD), C++ STL, Java Collections Framework, Operating Systems (OS), Computer Networks, Database Management Systems (DBMS)

Achievements & Certifications

- **Champion of the Quarter Award** *(Financial Software and System)* – Recognized for **successfully implementing the Common CAF framework**, enabling seamless integration of multiple banks into the CMS application.
- **MERN Stack Certification** *(8-Month Online Course by Harkirat)* – Completed an intensive program covering **full-stack web development with React, Node.js, Express, and MongoDB**.
- **CodeChef – 4-Star Rating** – Achieved **one of the highest competitive programming ratings**, demonstrating expertise in **DSA problem-solving**.
- **Research Publications (Under Review – IEEE IoT Journal)** – Two research papers on **AI-driven Smart Hydroponics Systems** are currently under peer review for potential selection.