

Sahil Wadhvani

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Education

University of Southern California, MS in Computer Science

Jan 2025 - Dec 2026

- GPA: 3.5/4.0

- **Coursework:** Analysis of Algorithms, Applied Cryptography, Web Technologies

Pune University, Bachelor of Engineering in Computer Science

Jun 2020 - May 2024

- GPA: 9.04/10.0

- **Coursework:** Design & Analysis of Algorithms(DAA), Systems Programming & Operating Systems, Computer Networks & Security, Blockchain Technology, Machine Learning & Applications, Software Engineering & Project Management

Experience

Associate Software Developer, Coditas – Pune, India

Jan 2024 – Dec 2024

- Engineered high-performance, production-grade APIs in **Go (Golang)** for a live stock trading platform, processing **10,000+ daily requests** with low-latency, real-time execution.
- Integrated **Redis** caching to optimize analytics queries, resulting in a **25% reduction in response time** and improved system scalability under high load.
- Consolidated multiple microservices into a unified watchlist API, improving maintainability and database efficiency using **PostgreSQL**, while reducing API complexity for frontend teams.

Software Development Intern (Security Engineering), EzConverse Media – India

Aug 2023 – Nov 2023

- Engineered a full-stack **Vulnerability Management System** using **React.js**, **Node.js**, **MongoDB**, and **Chart.js**, integrating **Nmap** and **Nikto** for automated port scanning and real-time CVE tracking.
- Developed secure, **RESTful APIs** for executing scans, retrieving logs, and managing session data; built dynamic dashboards to visualize scan results by severity, asset impact, and timestamp.
- Participated in secure code reviews and helped remediate **10+ critical vulnerabilities**, reducing triage time by **30%** and improving collaboration across engineering and security teams.

Skills and Certifications

Programming Languages: Python, Go (Golang), JavaScript, TypeScript, C++, Java, SQL, Bash, HTML5, CSS

Tools & Technologies: Git, Docker, Redis, PostgreSQL, MongoDB, Firebase, AWS(EC2, S3), GCP, Jenkins (CI/CD), Linux/Unix

Libraries & Frameworks: React.js, Node.js, Express.js, Angular.js, Flask, FastAPI, Tailwind CSS, Web3.py, JIRA, Truffle, Ganache

Certifications:

- Cisco Certified Network Associate (CCNA)
- Certified Ethical Hacker (CEH v12) – EC-Council
- Goethe-Zertifikat B1 (German Language Certification)

Technical Projects and Publications

Multimodal Depression Detection System

[\[Journal Publication\]](#) [\[Source Code\]](#)

- Developed a multimodal depression detection system integrating textual and image data from the FER2013 dataset by training a custom **neural network** model, leveraging BERT for text analysis and **ResNet** for image feature extraction.
- Built a **full-stack web application** using **Flask** and **React** to enable real-time depression prediction based on user-inputted text and image data, leveraging **REST API** for seamless model integration.
- Optimized data preprocessing pipeline by implementing robust **text cleaning**, **tokenization**, **natural language processing**, and **image transformation** techniques to enhance model accuracy and reduce noise in training.

Certificate Verification using Blockchain

[\[Journal Publication\]](#) [\[Source Code\]](#)

- Developed a **decentralized** certificate verification system using **Ethereum blockchain**, **Solidity smart contracts**, and **IPFS (Pinata)** to ensure tamper-proof, transparent certificate validation.
- Built a **web-based DApp** with Streamlit and **Web3.py**, integrating Firebase Authentication for secure access control and **Dockerized** the application for seamless deployment.
- Utilized **Ganache** and **Truffle** for **smart contract** development and testing, eliminating certificate fraud through blockchain's immutability and cryptographic hashing.