

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 JavaScript, React.js, Node.js, and Chart.js, integrating Nmap and Nikto scanners to automate port scanning, CVE tracking, and real-time threat visualization for enhanced security posture.
- Conducted vulnerability assessments and secure code reviews across web applications using tools like Burp Suite, Metasploit, and Nmap, identifying and helping remediate 10+ critical security flaws in both frontend and backend components.
- Developed interactive dashboards to visualize scan data with severity levels, asset impact, and timestamps, reducing triage time by 30% and significantly improving threat response coordination 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(basic), GCP (basic), 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

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 (backend) and React (frontend) 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 and transparent validation of certificates.
- 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.