

Harshil Patel

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EDUCATION

Master of Science in Software Engineering

San Jose State University, San Jose, California

Aug 2023 - May 2025

GPA - 3.5 / 4.0

- Coursework: Software Systems Engineering, Enterprise platforms, Data Mining, Enterprise Distributed Systems

Bachelor of Engineering in Information Technology

Gujarat Technological University, Gujarat, India

Jul 2017 - Jul 2021

CGPA - 9.01 / 10

- Coursework: Data structures and Algorithms, Database Systems, Object Oriented Programming, Web Technology

TECHNICAL SKILLS

Languages: C/C++, C#, Python, Java, Javascript, Typescript, Node.js, PHP, HTML, CSS, Shell, Bash

Databases: SQL, SQLite, NoSQL, MongoDB, Elasticsearch, Redis, DocumentDB

Libraries: React, Redux, Tailwind, Bootstrap, OAuth, SSL, CI/CD, PostCSS, Webpack

Frameworks: Express.js, Next.js, Angular, Flask, FastAPI, ASP.NET, Material-UI, SASS/SCSS, Swagger

Tools: Git, REST APIs, Linux/Unix, GRPC, AWS, Docker, Kubernetes, Jenkins, Nginx, Jira, Agile, Scrum

EXPERIENCE

Cisco Systems, Software Engineer II Intern, San Jose, CA

May 2024 - Aug 2024

- Built Operations Control Center using **React.js, Python, Docker, Ngnix, and AWS DocumentDB**, automating control over **50+ SaaS deployments** across 5 regions with a **multi-tenant architecture supporting 3000+ tenants**. minimized manual intervention by 90%, cut resource migration time (**AWS S3, ECR**) by 70%, and accelerated version releases by 60%
- Architected **distributed systems** with global reach (**5+ regions**), building task orchestration using load balancing, parallel processing, and heartbeat mechanism enhancing processing efficiency by 50% and ensuring **99.99% uptime**
- Developed **20+ RESTful APIs** in **Flask** with **Google OAuth, JWT tokens, Pagination, and role-based access control (RBAC)**, safeguarding production environments and preventing unauthorized access, cutting security incidents by 100%
- Programmed **Python agent** deployed across all regions, monitoring deployment health and interacting with **Jenkins, Kubernetes, Docker, and AWS**, elevating system reliability by 60% and ensuring near-zero downtime
- Designed a **SOC 2 and ISO 9001 compliant alerting and ticketing system** using **Webex** and **Jira**, minimizing response times by 25% for 100+ monthly alerts, improving compliance and incident management

AlVIDTechvision, Software Engineer, Ahmedabad, India

May 2021 - Jul 2023

- Spearheaded development of a **Video Intelligence Analytics platform**, integrating AI model-generated bounding boxes (**OpenCV, YOLO**) on live video streams. Developed **30+ real-time dashboards** with **React.js, Redux, Chart.js, Node.js, and Elasticsearch**, visualizing data across **20+ chart types** and supporting **3 streaming protocols**
- Programmed an **algorithm** to summarize **Elasticsearch** data, lowered storage costs by 80% (1GB compressed to 200MB), and refined query performance by 50%
- Created a **CLI tool** to auto-generate code for **React.js** and **Node.js**, saving 500+ engineering hours annually and standardizing code quality across teams
- Engineered a **dynamic React component toolkit** with over **50 customizable options**, reducing developer involvement by 90% and enabling product owners to quickly build unique dashboards autonomously. Saved team's **400+ hours** annually
- Incorporated **SonarQube, Jest, and React Testing Library** to increase test coverage from 60% to 90%, strengthening code quality and mitigating production bugs by 30%

Srchout, Software Engineer Intern, Remote

Mar 2021 - Apr 2021

- Constructed a scalable **E-learning platform** using **Angular** and **Node.js**, facilitating performance tracking for 10,000+ students and visualizing real-time progress data
- Integrated **Zoom APIs** in frontend & backend, supporting real-time video collab and secured authentication via **WebSDK**

PROJECT EXPERIENCE

Distributed Task Orchestrator C++, GRPC, OpenMPI, Python, Distributed Systems

Mar 2024 - Apr 2024

- Architected a non-blocking infrastructure for distributed task execution across multiple nodes, leveraging **OpenMPI** for multiprocessing and **GRPC** for task communication
- Implemented **load distribution algorithms** to optimize resource usage, reducing task execution times by 50%

ClubHub Live ReactJS, NodeJS, Express, MongoDB, Tailwind

Jun 2020 - Dec 2020

- Constructed a web app for discovering local events, connecting **Google Maps API** and **MongoDB geospatial search** to provide location-based results
- Configured **OAuth** for secure authentication via Google and Facebook, streamlining user registration process

ACHIEVEMENTS

Top **1.25%** in CodeChef October Challenge

263 out of 20,000+ participants

Top **1.19%** in CodeChef September Challenge

357 out of 30,000+ participants

Top **3.5%** in Facebook Hackercup round

1167 out of 32,000+ participants