

SHAIL PATEL

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EDUCATION

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| San Francisco State University, San Francisco, California, USA [GPA-3.6/4] | August 2023 – May 2025 |
| Master of Science: Computer Science | |
| • <i>Relevant Coursework:</i> Software Engineering, Database Management, Analysis of Algorithms, Artificial Intelligence, Data Mining. | |
| Vellore Institute of Technology, Tamil Nadu, India [GPA-3.5/4] | July 2019 – January 2023 |
| Bachelor of Science: Computer Science | |
| • <i>Relevant Coursework:</i> Web Development, Object Oriented Programming (OOP), Data Structures, Machine Learning, Cloud Computing. | |

WORK EXPERIENCES

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| Software Engineering Intern - <i>Second Spectrum</i>, Los Angeles, California (React.js, Typescript, AWS) | [June 2024 – August 2024] |
| • Engineered a play-by-play dashboard that supported real-time NBA data processing and handling over 100,000 events per game. | |
| • Designed the frontend using React and TypeScript, resulting in a 15% improvement in user interaction speed. Utilized AWS services such as Lambda and S3 to create a fault-tolerant, highly scalable backend capable of processing and reconciling data with sub-second latency. | |
| • Improved video content delivery efficiency by 25% through optimized data feed reconciliation, contributing to more accurate and timely analytics for coaches and sports analysts. | |
| Graduate Teaching Assistant - <i>San Francisco State University</i>, San Francisco, California | [January 2024 – May 2024] |
| • Assisted in grading assignments and exams for graduate course CSC810 – Analysis of Algorithms in Computer Science Department at San Francisco State University. | |
| Software Developer - <i>Flowjet Industries</i>, Ahmedabad-India (Python, Node.js, MongoDB) | [January 2023 – May 2023] |
| • Orchestrated the backend development and database management of the company E-commerce portal using Django, Node.js and MongoDB. Built API endpoints for the website and reduced database latency by 25%. | |
| • Utilizing machine learning algorithms, a 30-day demand forecast for a product was generated. This forecast, which achieved approximately 70% accuracy on real-time seller data, can assist in choosing a location that can fulfill the order. | |
| Software Development Intern - <i>JPAL South Asia</i>, New Delhi-India (React.js, Node.js, Snowflake) | [May 2022 – July 2022] |
| • Developed and implemented a digital communications strategy for the organization's website, aligning with broader communications goals. | |
| • Accomplished a 30% increase in user engagement, as measured by website analytics, by developing and implementing a comprehensive digital communications strategy. | |
| • Achieved a 40% faster resolution time for user issues, as measured by support ticket data, by responding to user inquiries promptly and coordinating with external developers for complex troubleshooting. | |

PROJECTS

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| <u>Leetcode AI Assistant extension</u> (JavaScript, Google Gemini LLM, Artificial Intelligence) | [September 2024] |
| • Spearheaded the development of this google chrome extension to autofill pseudocode or further code contents of a specific leetcode problem utilizing Google Gemini API tokens and JavaScript. | |
| • This project featured the implementation of an AI-based extension to infer details of a Leetcode problem using web scraping and then utilizing Google Gemini’s LLM to provide auto suggestions according to the input code. | |
| <u>Edu Bridge: A Learning Management System</u> (MySQL, Express, React.js, Node.js, Jira, AWS, Directus) | [May 2024] |
| • Spearheaded the full stack development of a comprehensive Learning video streaming application, Edu Bridge, utilizing the MERN stack. This project mirrors Canvas' functionality, offering video uploading, sharing, and real-time streaming capabilities. | |
| • Orchestrated project workflow and task management using JIRA. Built a modern and responsive web design using HTML/CSS and React.js. Backend API endpoints and features using Node mailer and multer. Used Directus for Content Management. | |
| • Implemented MySQL database for efficient data storage, coupled with Express and Node.js for scalable backend services. Deployed using AWS EC2. Crafted an interactive front-end experience with React, optimized for performance and cross-browser compatibility. | |
| <u>SFO Passenger Traffic Visualization System</u> (Next.js, D3.js, Node.js, PostgreSQL, Prisma) | [January 2024] |
| • Developed and maintained a real-time data visualization platform to analyze passenger traffic at San Francisco International Airport (SFO), leveraging a dataset of 35.3k rows, resulting in a 25% increase in data processing efficiency. | |
| • Implemented interactive visualizations using D3.js on a Next.js web application, providing insights into peak travel periods, airline performance, and passenger behavior, which led to a 30% improvement in operational decision-making speed. | |
| • Integrated PostgreSQL for efficient data storage and retrieval, with backend services managed using Prisma and Node.js, reducing database latency by 40% and ensuring seamless and scalable data handling. | |
| <u>Innovest- Stock Visualization and Analysis</u> (React.js, AlphaVantage API, Node.js, Redis) | [August 2023] |
| • Built a stock visualization app using React.js, Three.js, Node.js, and D3.js, displaying real-time data for all NYSE and NASDAQ stocks. | |
| • Leveraged the Alpha Vantage API to fetch and process stock data, enabling analysis of over 2,800 stocks with 15% faster load times. | |
| • Visualized complex stock tickers in interactive 3D formats, improving data accessibility and user engagement by 40%. | |

TECHNICAL SKILLS

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| Programming Languages: JavaScript, Python, C/C++, Swift | Database: MySQL, Oracle DB, MongoDB, PostgreSQL, Redis |
| Frontend Technologies: HTML, CSS, React.js, Next.js, Typescript | Backend Technologies: Node.js, Express, GraphQL, Django |
| Other Tools / Softwares: AWS, JIRA, Postman, Docker, Git, Directus, Snowflake, Azure, Firebase, HuggingFace | |

LEADERSHIP

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| Vice Chair - <u>Computer society of India at Vellore Institute of Technology (CSI – VIT)</u> | [August 2021-May 2022] |
| Technical Team Member – <u>Google Developers student Club at VIT</u> | [December 2020-May 2022] |