

SUMMARY

Full Stack Engineer with 3 years of experience building and deploying web applications using React, TypeScript, Node.js, and PostgreSQL. Built full-stack apps with Next.js, FastAPI, and Supabase, and deployed them on Render, Vercel, and AWS EC2. Familiar with Docker and Kubernetes for containerization and orchestration. Proven track record of improving performance, leading production support, and delivering secure, responsive features. Master's degree in Computer Science from Michigan Tech.

SKILLS

JavaScript (ES6+) | TypeScript | React.js | Next.js | HTML | CSS3 / SCSS | NoSQL (MongoDB, Supabase) | Webpack | Slack | Tailwind CSS | Node.js | Express | FastAPI | React Testing Library (RTL) | Babel | NPM | Git | Figma | RESTful APIs | Jest | State Management (Redux, Zustand, React Context API) | Material UI (MUI) | AWS EC2 | Cloudinary | SQL (MySQL, PostgreSQL) | GitHub | Jira | Bitbucket | Confluence | Agile | Scrum | JSON | Google OAuth2 | Vercel | Render | DevOps (Docker, Kubernetes, CI/CD, AWS CodeDeploy, Jenkins) | Websockets | Google Cloud Platform (GCP) | AI | Software Development Life Cycle (SDLC) | JWT

WORK EXPERIENCE

Cognizant Technology Solutions - Kolkata, India

Sept 2020 – Jun 2023

Full Stack Engineer

- Engineered a responsive, single-page e-commerce application using React, TypeScript, JavaScript, Node.js, and PostgreSQL, contributing to \$15 billion in annual revenue.
- Led production support and continuous maintenance of frontend and backend code for websites and applications, resolving critical bugs and UI issues through root cause analysis, which reduced user complaints from 2,000 to 500 per month and improved overall system stability.
- Architected a centralized Redux state to manage sessions and cart data efficiently, which reduced duplicate API calls by 60% and improved app responsiveness by 35%.
- Implemented rate limiting and throttling in RESTful microservices, which improved performance and protected services from excessive traffic by limiting each user to 10 requests per minute. As a result, it effectively blocked denial-of-service (DoS) attacks, API scraping, and brute-force attempts, protecting sensitive data and ensuring regulatory compliance.
- Developed a real-time product search with pagination using asynchronous code with Promises and async/await, allowing users to see results instantly and load more items. This reduced server load and bandwidth usage, lowering costs and ensuring stable performance and scalability.
- Contributed to DevOps by configuring and managing CI/CD pipelines with Git and Jenkins, and automated deployments to AWS EC2 using CodeDeploy, resulting in faster, more reliable production releases and a 30% reduction in post-deployment issues.
- Optimized application performance by implementing lazy loading and code splitting in a React-based single-page application, reducing initial load time significantly and allowing users to access content faster.
- Wrote unit tests and practiced Test-Driven Development (TDD) using Jest and React Testing Library, leading to 40% fewer production issues.
- Mentored 2 interns by conducting knowledge-sharing sessions and code reviews, supporting 10+ successful deployments, and improving team performance.

Cognizant Technology Solutions - Kolkata, India

Jan 2020 – Apr 2020

Software Engineer Intern

- Resolved 10+ critical bugs and delivered 5+ features, boosting user engagement by 50% and cutting response time from 800ms to 320ms.

EDUCATION

Master of Science, Computer Science, 3.85/4 GPA

Aug 2023 - Apr 2025

Michigan Technological University

Bachelor's of Technology, Computer Science, 3.39/4 GPA

Jul 2016 - May 2020

University of Engineering and Management

TECHNICAL PROJECTS

ChatAway - Real-time Chat App | Demo | Live Site | GitHub

- Built a real-time chat application to support both text and image messaging using Socket.IO and WebSockets, improving user interactivity and communication speed.
- Developed dynamic frontend forms to capture and validate user input, securely submitting data to the backend via REST APIs, which enhanced the reliability and security of user interactions.
- Engineered user and message schemas in MongoDB to handle real-time chat data efficiently, resulting in faster data access and smoother performance during active user interactions.
- Implemented secure authentication using OAuth2 via Google Cloud Platform and protected sensitive routes with JWT, ensuring only authorized users could access critical features.
- Integrated Zustand for global state management, handling real-time messaging, authentication status, socket connections, and persisting user theme preferences across sessions, resulting in a smooth and consistent user experience.
- Styled the application with daisyUI and Tailwind CSS 4, achieving a responsive and modern UI design that performed well across devices.
- Used Cloudinary for image storage, allowing users to upload and share media files, reducing server load and enhancing content delivery.
- Deployed the application on Render, ensuring fast load times and consistent uptime, contributing to a smooth user experience in production.
- Tech Stack: React.js, Node.js, Express, MongoDB, Tailwind CSS, Render, and DaisyUI.

Personal Portfolio Website | Live Site | GitHub

- Built a fully responsive personal portfolio website from scratch using Next.js, TypeScript, and Tailwind CSS to highlight my projects, skills, and contact information, creating a fast-loading and mobile-friendly experience with clean navigation.
- Set up and connected Supabase's PostgreSQL database to handle structured data for project listings and professional endorsements, making it easier to manage content and support real-time updates.
- Added an auto-sliding carousel to the endorsements section that cycles every three seconds, making the site more interactive and keeping visitors engaged.
- Used Git and GitHub to track changes and push updates regularly, keeping the codebase organized and easy to maintain.
- Deployed the site using Vercel, taking advantage of its global CDN to ensure fast and reliable performance for users across different locations.
- Tech Stack: Next.js, TypeScript, JSON, Supabase, and Tailwind CSS.

Plant Disease Detection | Demo | GitHub

- Built a full-stack web app that identifies plant diseases like Early Blight, Late Blight, and Healthy by allowing users to upload images for analysis.
- Trained an image classification model using TensorFlow and Keras in Google Colab on a Kaggle dataset, applying data preprocessing and evaluation techniques to reach 95% accuracy.
- Developed a Python backend using FastAPI to serve the trained model and handle prediction requests through clean, accessible API endpoints.
- Designed a React.js frontend where users can upload images and view results with confidence scores, using custom CSS for a clean and simple interface.
- Tech Stack: Python, FastAPI, TensorFlow, React.js, JavaScript, and CSS3.

LEADERSHIP & INVOLVEMENT

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| • Research Assistant at Michigan Technological University | Jun 2025 – Present |
| • Graduate Student Assistant at Michigan Technological University | Aug 2024 – Dec 2024 |
| • Student Supervisor at WADS Dining Services | Jan 2024 – Jun 2024 |
| • Member of the Indian Student Organization of Michigan Technological University. | Aug 2023 – Apr 2025 |
| • Volunteer in Cognizant Outreach events. | Sept 2020 – Jun 2023 |