# Vayu Nandhan | Full Stack Developer

KS, USA | +1 (913)-413-3658 | vayunandhan702@gmail.com

#### **SUMMARY**

**Full Stack Developer** with nearly **4 years of experience** delivering high-performance web applications across enterprise and consumer platforms. Known for improving system efficiency, accelerating deployment cycles, and reducing infrastructure costs. Demonstrated success working in Agile teams to meet critical deadlines, enhance user experience, and ensure accessibility and security compliance. Strong track record of translating business needs into scalable solutions while maintaining high standards in quality, collaboration, and cross-functional communication.

#### **EDUCATION & CERTIFICATION**

**Masters in Computer Science** 

Aug 2024

University of Central Missouri, MO

**Bachelors in Information Technology** 

May 2021

Sreenidhi Institute of Science and Technology, India

#### **TECHNICAL SKILLS**

Languages & Scripting: JavaScript (ES6+), TypeScript, Python, Java, SQL, Bash, HTML5, CSS3, Sass

Front-End Technologies: React.js, Next.js, Redux, Tailwind CSS, Bootstrap, Responsive Design, Figma to Code Conversion, Chart.js, D3.js

Back-End Technologies: Node.js, Express.js, Spring Boot, FastAPI, RESTful APIs, GraphQL, WebSockets

Databases: PostgreSQL, MySQL, MongoDB, Redis, ORM tools: Sequelize, Mongoose, Hibernate

DevOps & CI/CD: Git, GitHub Actions, Jenkins, Docker, Kubernetes (basic), CI/CD pipelines, Nginx, PM2, Linux CLI

Cloud & Hosting: AWS (EC2, S3, Lambda, RDS), Vercel, Netlify, Firebase, Basic knowledge of Azure or GCP is a plus

**Testing & Debugging:** Jest, Mocha, Chai, Cypress, Postman, Swagger, Debugging tools (Chrome DevTools, VSCode) **Security:** OAuth 2.0, JWT, HTTPS, Helmet.js, CORS, Basic security best practices (XSS, CSRF prevention)

**Project Management & Tools:** Agile, Scrum, Jira, Trello, VS Code, Postman, Figma, Notion

#### **PROFESSIONAL EXPERIENCE**

Black & Veatch, KS, USA Sep 2024 – Current

#### **Full Stack Developer**

- Re-architected internal engineering dashboards using React.js, Next.js, and Tailwind CSS, improving user experience and reducing average page load times by 38% through lazy loading, bundle splitting, and selective hydration.
- Revitalized high-availability backend APIs with FastAPI and PostgreSQL, reducing server response latency by 40% after integrating Redis
  caching and async I/O handling.
- Automated CI/CD processes using GitHub Actions, Docker, and Nginx, cutting manual deployment time by over 90% and enabling zerodowntime blue/green releases.
- Reduced monthly AWS spend by 22% through refactoring resource provisioning (EC2 right-sizing, removing idle Lambdas, and optimizing RDS connections), monitored with CloudWatch and custom shell scripts.
- Converted 40+ UI mockups from Figma into fully accessible, WCAG-compliant components, enhancing cross-browser and mobile performance and reducing front-end QA defects by 50%.
- Collaborated with cross-functional teams (4 developers, 1 QA, 1 PM) in 2-week Agile sprints, maintaining a 98% sprint delivery rate and actively contributing to grooming and retrospective sessions.

Capgemini, India Feb 2021 – Dec 2022

## **Full Stack Developer**

- Designed and deployed modules for an internal HR and finance application using React.js, Spring Boot, and MySQL, improving page interaction speed by 45% through optimized rendering and indexed backend queries.
- Secured APIs with JWT, OAuth 2.0, and Spring Security, reducing authentication-related support tickets by 80% and passing internal security audits with zero major findings.
- Convinced reusable visualization widgets with Chart.js and D3.js, enabling operations managers to analyze 15+ KPIs in real-time across projects and departments.
- Improved code quality and system stability by increasing test coverage from 58% to 86% using Jest, Mocha, and Cypress, resulting in 30% fewer defects during regression testing.
- Modernised Docker containers for backend services and solved them into Jenkins pipelines for automated test and build cycles, reducing CI feedback loop by 60%.
- Acted as a liaison between front-end and backend teams, helping clarify API contracts, improving handoff accuracy, and reducing integration rework during UAT by 35%.

### Reliance Industries Limited (Jio Platforms), India

Mar 2020 – Jan 2021

### **Back - End Developer**

- Developed and maintained core UI components using JavaScript (ES6+), HTML5, and Tailwind CSS for a customer-facing telecom platform used by over 2 million users.
- Implemented WebSocket-based live data feeds to power real-time status monitoring dashboards for the NOC (Network Operations Center), reducing alert response time by 20%.
- Reduced Time to First Byte (TTFB) by 42% by optimizing build pipeline, compressing assets, and deferring non-critical scripts across mobile
  and desktop platforms.
- Generated a shared internal component library to support design consistency across multiple web apps, reducing duplicated effort by 30% and accelerating team velocity.
- Worked closely with QA to test feature flows with Postman and Chrome DevTools, identifying and resolving over 50 UI/API integration bugs before release.

### **PROJECTS**

# AI Teach Platform – AI-Powered Learning Assistant

- Developed an Al-driven video generation system using Django REST, React.js, Docker, and Stable Diffusion, conducted SadTalker and Coqui TTS for lifelike avatar animation and speech synthesis.
- Designed secure, JWT-authenticated microservices and optimized containerization for low-resource deployment, reducing infrastructure costs by 30%.

#### NGO Management System - Donation & Communication Portal

- Restructured a full-stack donation and communication platform using Django, PostgreSQL, and Stripe API with role-based access control and secure data models.
- Enabled real-time donor-admin messaging and processed over 5,000 transactions through PCI-compliant Stripe integration.

#### Healthcare AI Chatbot + Analytics Dashboard

- Started a Flask-based LLM-powered chatbot for symptom triage with token-secured REST APIs, processed with GPT for contextual health responses.
- Pioneered an analytics dashboard using React.js, Chart.js, and SQL to visualize real-time user interactions and engagement metrics.