

# Sai Vivek Vangaveti – Professional Knowledge Document

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## Personal Details

**First Name:** Sai Vivek

**Last Name:** Vangaveti

**Full Name:** Sai Vivek Vangaveti

## Introduction

### Short Intro

Sai Vivek Vangaveti is a skilled Full Stack Engineer with over 4 years of experience in developing high-performance web applications and services. He specializes in modern JavaScript frameworks and cloud-native solutions, with a recent focus on integrating Generative AI into applications.

### Medium Intro

Sai Vivek Vangaveti is an experienced Full Stack Developer adept at building scalable, reliable software solutions. With 4+ years of hands-on experience crafting SEO-optimized single-page applications and robust APIs, he delivers end-to-end features with a customer-first mindset. An AWS Certified Developer, he is proficient in CI/CD pipelines, microservices architecture, RESTful and GraphQL APIs, and scalable system design. Sai is passionate about emerging technologies and recently focuses on incorporating GenAI capabilities into web platforms to enhance user experience.

### Long Intro

Sai Vivek Vangaveti is a Full Stack Engineer known for blending modern web technologies with cutting-edge cloud and AI solutions. He has more than four years of professional experience building high-performance, scalable web applications and services. Sai's expertise spans the entire software stack—from intuitive front-end interfaces using React/Next.js to robust back-end APIs and databases. In recent roles, he has led front-end architecture for complex applications, implemented secure authentication mechanisms, and built cloud-native features that serve thousands of users. He holds an AWS Certified Developer – Associate credential, underscoring his proficiency in AWS cloud services and DevOps practices. Sai's background in continuous integration/delivery, microservices, and system design ensures that the software he develops is not only feature-rich but also maintainable and scalable. An advocate of agile methodologies and DevOps culture, he thrives in fast-paced environments and iterates quickly based on user feedback. He

continually hones his skills through certifications and projects—from mastering advanced React patterns to exploring AI integrations such as a Retrieval-Augmented Generation (RAG) assistant. Sai’s blend of deep technical knowledge and proactive, learning-oriented mindset makes him a valuable contributor to any forward-looking software engineering team.

## Social Links

LinkedIn: <https://www.linkedin.com/in/vsaivivek/>

GitHub: <https://github.com/saivivek116>

Email: [saivivek116@gmail.com](mailto:saivivek116@gmail.com)

LeetCode: <https://leetcode.com/u/vivbruce/>

## Achievements

- AWS Certified Developer – Associate – Issued September 2024

Earned the AWS Certified Developer – Associate credential, demonstrating the ability to develop and maintain applications on the AWS cloud platform.

- “Joy of React” Certificate – Completed 2024

Awarded certificate of completion for The Joy of React course by Josh Comeau, indicating thorough understanding of modern React development patterns and best practices.

- “Smart Coder” Certification – Awarded 2024

Achieved Smart Coder certification from the Smart Interviews platform, recognizing strong problem-solving and coding abilities.

- Career Essentials in GitHub (Professional Certificate) – Completed 2024

Completed the Career Essentials in GitHub professional certificate learning path, verifying proficiency in using GitHub for version control, collaboration, and CI/CD workflows.

- Docker Essentials Certification – Completed 2024

Completed a comprehensive course in Docker, demonstrating fundamental knowledge of containerization and hands-on experience in building, deploying, and managing Docker containers.

## Education

### Education 1

**Institution:** George Mason University, Fairfax, VA

**Degree:** Master of Science

**Field of Study:** Computer and Information Science (STEM)

**Specialization:** N/A

**Relevant Courses:** Advanced Algorithms, Web Applications Development, Cloud Computing

**Grade:** GPA 3.97/4.00

**Start Date:** January 2023

**End Date:** December 2024

### Education 2

**Institution:** Jawaharlal Nehru Technological University, Hyderabad, India

**Degree:** Bachelor of Technology

**Field of Study:** Computer Science and Engineering

**Specialization:** N/A

**Relevant Courses:** Data Structures, Operating Systems, DBMS, Networks

**Grade:** GPA 3.44/4.00

**Start Date:** August 2016

**End Date:** May 2020

## Work Experience

### The Donovan's Venom – Full Stack Engineer

**Work Description:** Leading front-end development including architecture, building reusable UI components, integrating REST/GraphQL APIs, and resolving critical bugs to launch the MVP that now serves 1,000+ active subscribers. Implemented secure user authentication with OAuth2 and JWT. Integrated a RAG-based chat assistant using LangChain and OpenAI. Also developed back-end services and ensured proper documentation and robust error handling.

**Skills Used:** Next.js, Zustand, Tailwind CSS, Bun.js, OAuth2, JWT, LangChain, OpenAI API, Express.js, GraphQL, Terraform, AWS

**Start Date:** October 2024

**End Date:** Present

### George Mason University – Software Engineer (Research Assistant)

**Work Description:** As a software engineer for the NASA-funded Geoweaver project, he built and enhanced features for an interactive, drag-and-drop workflow orchestration tool for geospatial data pipelines. He designed and implemented scalable database schemas for PostgreSQL, including indexing strategies and query optimization to reduce latency. He significantly improved platform reliability by writing Cypress end-to-end tests and Mocha unit tests, which increased test coverage by 40%. A major contribution was the creation of a CI/CD pipeline using GitHub Actions, which automated the build, Docker image creation, testing, and deployment processes, cutting deployment time from hours to under 10 minutes. Furthermore, he developed a machine learning workflow for disease prediction using a Random Forest model within Geoweaver, a contribution that led to a published research paper.

**Skills Used:** React, D3.js, Spring Boot, PostgreSQL, Cypress, Mocha, Docker, GitHub Actions, AWS EC2

**Start Date:** February 2024

**End Date:** October 2024

### Phenom People, Inc. – Software Development Engineer I

**Work Description:** Migrated 100+ legacy jQuery pages to React, created an internal UI component library adopted by 90% of teams, deployed front-end apps to AWS S3, and optimized performance by refactoring state management resulting in 40% gains. He was instrumental in creating an internal UI library, building over 20 reusable React components that achieved 90% adoption and reduced development time across internal teams by 30%. He enhanced React application performance by 40% by refactoring state management with Context API and Redux. His work on responsive design resulted in a 30% increase in candidate applications and a 20% decrease in drop-off rates. Additionally, he took on a leadership role by mentoring three interns for a three-month period, conducting technical sessions and guiding their development.

**Skills Used:** React, Node.js, Express.js, JavaScript/TypeScript, Redux, AWS S3, Jenkins, MySQL

**Start Date:** September 2020

**End Date:** December 2022

## Legato Health Technologies – Software Engineer Intern

**Work Description:** Developed responsive web pages with React, implemented Spring Boot REST APIs, created automated test scripts with Selenium and Jest, achieving 60% reduction in manual testing and full WCAG compliance.

**Skills Used:** React, Spring Boot, Hibernate, MySQL, Selenium, Jest, OAuth2

**Start Date:** June 2020

**End Date:** September 2020

## Projects

**projectTitle :** Front-End Components Library

**Description:** Library of reusable React components with Storybook documentation to accelerate UI development.

**Project URL:** Demo available via Storybook

**GitHub Link:** <https://github.com/saivivek116/frontend-components>

**Technology Used:** React, TypeScript, Styled Components, Storybook, Vite, Jest

**Start Date:** May 2025

**End Date:** Present

**projectTitle :** Cloud Mart

**Description:** A cloud-native e-commerce web and mobile application with infrastructure automated via Terraform and containerized deployment on AWS EKS. Features an AI chat assistant powered by AWS Bedrock for product recommendations.

**Project URL:** Live (internal) – Demo available upon request.

**GitHub Link:** <https://github.com/saivivek116/cloudmart-frontend>

**Technology Used:** React, React Native, Shadcn UI, JavaScript, AWS Bedrock, AWS Lambda, Terraform, Docker, Kubernetes (EKS), AWS CodePipeline

**Start Date:** February 2025

**End Date:** February 2025

**projectTitle :** Geoweaver

**Description:** NASA-funded geospatial workflow management tool with drag-and-drop interface. Contributed front-end features, optimized PostgreSQL backend, and created CI/CD pipelines.

**Project URL:** <https://esipfed.github.io/Geoweaver/>

**GitHub Link:** <https://github.com/ESIPFed/Geoweaver>

**Technology Used:** React, D3.js, Spring Boot, PostgreSQL, Docker, Cypress, GitHub Actions

**Start Date:** February 2024

**End Date:** October 2024

**projectTitle :** Freaking Fit

**Description:** Personal fitness tracker with user authentication, exercise logging, and diet management, leveraging Firebase backend.

**Project URL:** <https://freaking-fit-v5.web.app>

**GitHub Link:** [https://github.com/saivivek116/freaking\\_fit](https://github.com/saivivek116/freaking_fit)

**Technology Used:** React, Firebase, Material-UI, JavaScript

**Start Date:** 2023

**End Date:** 2023

**ProjectTitle:** College Community Website

**Description:** Campus social platform enabling students and staff to share posts and blogs in real time. Built with the MEAN stack as a final year project.

**Project URL:** Internal (demo available upon request)

**GitHub Link:** Private repository – available upon request

**Technology Used:** Angular, Node.js, Express, MongoDB

**Start Date:** 2019

**End Date:** 2020

**projectTitle :** JavaScript Mini Projects

**Description:** Collection of mini-apps showcasing front-end techniques and JavaScript proficiency.

**Project URL:** <https://vivibruce.github.io>

**GitHub Link:** [https://github.com/saivivek116/js\\_projects](https://github.com/saivivek116/js_projects)

**Technology Used:** HTML, CSS, JavaScript (ES6+)

**Start Date:** 2020

**End Date:** 2022

**projectTitle :** Personal Portfolio Website

**Description:** Professional portfolio site built with Next.js and Tailwind CSS, serving as an online resume and project showcase.

**Project URL:** <https://saivivek.me>

**GitHub Link:** <https://github.com/saivivek116/portfolio>

**Technology Used:** Next.js, TypeScript, Tailwind CSS, Vercel

**Start Date:** 2025

**End Date:** Present

**projectTitle:** AI Finance Management

- **projectDescription:** A Smart Financial Assistant designed to help users manage their finances across multiple accounts. The application allows for personalized budget setting, real-time tracking of income and spending, and automated email alerts for budget limits. A standout feature is the ability for users to log purchases by simply snapping a photo of a receipt. The platform's core value lies in providing actionable financial insights through Google's Gemini AI, all within a seamless user experience. This project is a prime example of his ability to build practical tools powered by modern AI.
- **technologyUsed:** Next.js, JavaScript, Gemini AI, LangChain
- **startDate:** Jan 2025
- **endDate:** Jan 2025

## Skills

### Programming Languages

- JavaScript – 9/10 – ≈5 years
- TypeScript – 8/10 – ≈3 years

- Java – 7/10 – ≈3 years
- Python – 7/10 – ≈3 years

### Web & Front-End

- React.js – 9/10 – ≈5 years
- Next.js – 8/10 – ≈1 year
- Angular – 7/10 – ≈1 year
- React Native – 7/10 – ≈1 year
- Redux – 8/10 – ≈3 years
- Zustand – 7/10 – ≈1 year
- HTML5/CSS3 – 9/10 – ≈5+ years
- SCSS/Sass – 8/10 – ≈4 years
- Tailwind CSS – 8/10 – ≈2 years
- Framer Motion – 6/10 – ≈1 year

### Back-End & Servers

- Node.js – 8/10 – ≈4 years
- Express.js – 8/10 – ≈4 years
- Spring Boot – 7/10 – ≈1 year
- RESTful API Design – 9/10 – ≈4 years
- GraphQL – 7/10 – ≈1 year
- Microservices Architecture – 7/10 – ≈2 years
- OAuth2/JWT – 8/10 – ≈2 years
- Serverless (AWS Lambda) – 7/10 – ≈1 year

### Databases & Data Stores

- MySQL – 8/10 – ≈4 years
- PostgreSQL – 8/10 – ≈2 years
- MongoDB – 7/10 – ≈3 years
- DynamoDB – 6/10 – ≈1 year
- Supabase – 6/10 – ≈1 year
- Elasticsearch – 6/10 – ≈1 year
- Pinecone – 5/10 – <1 year
- Redis – 7/10 – ≈2 years

### Cloud & DevOps

- AWS Cloud – 8/10 – ≈3+ years
- Docker – 8/10 – ≈3 years
- Kubernetes (EKS) – 7/10 – ≈1 year
- Terraform – 7/10 – ≈1 year
- CI/CD – GitHub Actions, Jenkins, CodePipeline – 8/10 – ≈2 years
- Vercel & Netlify – 7/10 – ≈1 year



- AWS Bedrock (GenAI) – 6/10 – <1 year

### Testing & Quality

- Jest – 8/10 – ≈3 years
- Mocha & Chai – 7/10 – ≈1 year
- Cypress – 7/10 – ≈1 year
- Selenium – 6/10 – ≈1 year
- Postman – 8/10 – ≈4 years
- Accessibility (WCAG) – 7/10 – ≈1 year

### Tools & Platforms

- Git & GitHub – 9/10 – ≈5+ years
- NPM & Yarn – 9/10 – ≈5 years
- Webpack/Babel/Vite – 8/10 – ≈4 years
- Storybook – 7/10 – ≈2 years
- Jira & Agile – 8/10 – ≈4 years
- Figma – 7/10 – ≈2 years
- Linux/Unix CLI – 8/10 – ≈3 years
- GitHub Copilot – 7/10 – ≈1 year