

Anantha Sai Valluru

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PROFESSIONAL SUMMARY

Full-Stack Engineer with a **Master's in Computer Science** from **Illinois Institute of Technology**, specializing in **cloud-native architectures** and **distributed systems**. Experienced in engineering scalable applications with **Next.js**, **Node.js**, and **MongoDB**, with a focus on **p99 latency optimization**, asynchronous data workflows, and production-grade API design. Proven track record of shipping measurable impact — from sub-1s page loads to 40% reductions in manual workflows.

TECHNICAL SKILLS

Languages: TypeScript, JavaScript (ES6+), Python, Java, SQL, C
Frontend: Next.js, React, Redux, HTML5, CSS3, Tailwind CSS, Framer Motion, Responsive Design
Backend & Frameworks: Node.js, Express.js, Django, RESTful APIs, GraphQL, Mongoose, ISR
Databases: MongoDB (NoSQL), MySQL, PostgreSQL, SQL Server, Redis
DevOps & Cloud: Git, GitHub Actions, Docker, AWS (EC2, S3, Lambda), Vercel, CI/CD Pipelines
Testing & Tools: Jest, React Testing Library, Jira, Figma, Adobe XD
Machine Learning (Academic): TensorFlow, OpenCV, scikit-learn

EXPERIENCE

Software Intern

May 2022 – Jul 2022

Andhra Pradesh State Skill Development Corporation (APSSDC), Vijayawada, India

- Architected and deployed a **production-grade** full-stack platform using **Django**, **Bootstrap**, and **SQL** serving **500+ daily active users**, with query optimization and caching strategies improving page load times by **20%**.
- Designed a modular architecture with a reusable **component library**, reducing development cycles by **30%** while ensuring system scalability and maintainability.
- Orchestrated Agile sprints using **Git** and **Jira**; automated administrative workflows to eliminate **40%** of manual operational effort and increase team throughput.

Research Intern

Jan 2021 – Jul 2021

360 Research Foundation, Hyderabad, India

- Designed and deployed a **farmer information web platform** using HTML, CSS, JavaScript, and Django, improving data access speed and usability for **150+ registered users**.
- Conducted usability testing with **100+ participants** and iteratively refined the UX, driving a **37% increase in user adoption rate**.
- Optimized SQL queries and implemented fully responsive layouts, reducing backend latency by **22%** and ensuring cross-device compatibility.

PROJECTS

Portfolio Website

asv-dev.vercel.app

Next.js 15, TypeScript, MongoDB Atlas, Tailwind CSS, Framer Motion, Vercel

- Engineered a **full-stack portfolio** with a custom tactical HUD interface, implementing **Incremental Static Regeneration (ISR)** to deliver **sub-100ms content updates** from MongoDB Atlas without redeployment.
- Achieved **100/100 Lighthouse performance score** and **sub-1s page transitions** via optimized SEO metadata, OpenGraph integration, and Vercel edge deployment.
- Implemented live data streaming and dynamic routing with **Next.js App Router**, applying production-grade architecture patterns for scalable, high-throughput web applications.

Student Task Tracker

Personal Project

- Developed a full-stack task management app using **React** for frontend and **Node.js/Express** for backend APIs, supporting dynamic task creation and updates.
- Implemented CRUD operations with a lightweight JSON data layer, improving prototype speed and reducing server setup complexity by **25%**.
- Applied responsive design using Tailwind CSS and optimized state management with React Hooks to reduce render time by **18%**.

EDUCATION

Illinois Institute of Technology, Chicago, IL

May 2025

Master of Computer Science

SRM University, Andhra Pradesh, India

May 2023

B.Tech., Computer Science and Engineering