SAATVIK NAGPAL

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EDUCATION

University of Southern California　　　　　　　　　　　　　　　　　　　　Los Angeles, California
Master of Science in Computer Science (GPA: 3.65/4.0)　　　　　　　　　　　　　　*Jan 2024 - May 2025*
Relevant Courses: Artificial Intelligence, Web Technologies, Algorithms, Game Development, Information Retrieval, Research

Northeastern University　　　　　　　　　　　　　　　　　　　　　　　Boston, Massachusetts
Master of Science in Computer Software Engineering [Transferred] (GPA: 4.0/4.0)　　　　*Sep 2023 - Dec 2023*
Relevant Courses: Program Structures and Algorithms, Object Oriented Design using Java

Guru Gobind Singh Indraprastha University　　　　　　　　　　　　　　　　　　New Delhi, India
Bachelor of Technology in Computer Science (GPA: 9.28/10)　　　　　　　　　　　　*Aug 2019 - July 2023*
Relevant Courses: Data Structures, Operating Systems, Software Engineering, Machine Learning, NLP, AI, Data Science, AR/VR

TECHNICAL SKILLS

Core Technologies: Java, Python, C++, JavaScript, TypeScript　　**Cloud**: Google Cloud Platform, AWS, Docker, Kubernetes, CI/CD
Frontend: React.js, Next.js, HTML, CSS/Tailwind CSS, React Native　　**Backend**: Spring Boot, Express.js, Node.js, GraphQL, PHP
Databases: MongoDB, MySQL, Firebase, PostgreSQL　　**Development Tools**: Git, Postman, Linux

WORK EXPERIENCE

Software Engineering Fellow | *Headstarter AI, Remote*　　　　　　　　　　　　　*Jul 2024 - Sep 2024*
- Developed and deployed **5 AI** projects within a **5-week** sprint cycle, utilizing **React.js**, **Next.js**, **Firebase**, **Clerk, and Vercel**, reducing deployment time by **30%** and achieving a **95%** on-time delivery rate.
- Built **AI**-driven customer support and **SaaS** products, including a **Next.js**-based agent with **OpenAI** & **Pinecone** (**90%** accuracy, **40%** faster responses) and a flashcard app with **Llama 3.1** & **Stripe** (**50%** higher engagement, **25%** subscription growth).
- Created an automated **Rate My Professor** web scraper with **Pinecone** and **LangChain RAG**, reducing data retrieval latency by **40%** and serving **1,000+** daily users with relevant queries.

Software Developer Intern | *Desi QnA, Remote*　　　　　　　　　　　　　　　*Apr 2023 - Aug 2023*
- Increased user retention by **60%**, as measured by engagement metrics, by upgrading Desi QnA to a **PWA** and ensuring high-performance code.
- Reduced unauthorized access by **75%** through implementing **blockchain**-based authentication with **Ethereum** smart contracts.
- Enhanced site security by **70%**, as measured by security audits, by integrating **Google reCAPTCHA** using **AWS CodePipeline**.

Frontend Developer Intern | *TGH Technologies, Remote*　　　　　　　　　　　　*May 2022 - Aug 2022*
- Improved user engagement by **30%**, as measured by interaction metrics, by developing features with **React.js** and **Redux Toolkit**.
- Achieved a **30%** increase in user acquisition by creating an advanced admin dashboard with **Chart.js**.
- Enhanced user satisfaction by **20%** and reduced support inquiries by **25%** through a **UI** revamp of Boring Bots.

PERSONAL PROJECTS

Xpense | *Source Code*　　　　　　　　　　　　　　　　　　　　　　　*Jan 2025 – Feb 2025*
- Designed and developed a scalable **Full Stack** Expense Tracker application using **React Native**, **Java**, **Spring Boot**, and **MySQL**, leveraging **Kafka** for asynchronous event-driven architecture and **Docker** for containerized microservices deployment on **AWS**.
- Implemented a scalable microservices architecture with **Kong API** Gateway, **AWS CDK**, and a dedicated Auth Service, optimizing user management, expense tracking, and system performance.

AI FlashCards | *Website* | *Source Code*　　　　　　　　　　　　　　　　　*Aug 2024 – Aug 2024*
- Engineered an **AI SaaS** platform using **Next.js**, **OpenAI**, and **Langchain**, enabling users to generate personalized **flashcards** by entering text or uploading PDFs, leading to a **50%** increase in user engagement.
- Enhanced user experience and security by integrating **Tailwind CSS**, **ShadCN UI**, **Clerk** for route protection, and **Firebase** for backend support, resulting in a **40%** improvement in user retention.

VisionaryLab | *Website* | *Source Code*　　　　　　　　　　　　　　　　　*Apr 2024 – May 2024*
- Developed an **AI SaaS** platform for image transformations, utilizing **Next.js** and **TypeScript** for the frontend and backend, **Kafka** for real-time data streaming, and **TensorFlow** for machine learning, reducing processing time by **40%**.
- Integrated **Cloudinary AI** for image processing, **MongoDB** for database management, **Clerk** for secure authentication, and **Stripe** for seamless payment processing, resulting in a **20%** increase in transaction reliability and a **15%** boost in user trust.

ACHIEVEMENTS

- Achieved recognition in multiple hackathons and coding competitions, including winning the Grand Finale in **Smart India Hackathon 2022**, 2nd Runner-Up in **Tally CodeBrewers**, and "Best Use of Postman and API" award at **PsychHack 2022**.