

# VIBHA SUNEEL NAVALE

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## EDUCATION

<b>University of Illinois Chicago, IL</b> Master of Science in Computer Science	Jan 2024 – Expected Dec 2025 GPA: 4.00
<b>RNS Institute of Technology, Bengaluru, India</b> Bachelor of Engineering in Information Science	2017 – 2021 GPA: 9.08

## TECHNICAL SKILLS

<b>Languages &amp; Databases</b>	JavaScript/TypeScript, Java, Python, SQL, PostgreSQL
<b>Frontend &amp; Backend</b>	React, Next.js, AngularJS, Node.js, Express, REST APIs
<b>Cloud, DevOps &amp; Tools</b>	AWS, Docker, Git, CI/CD, Jira, Supabase, Postman, DBeaver, New Relic, Sumo Logic

## EXPERIENCE

<b>Software Engineer</b> Cimpress	Aug 2021 – Dec 2023 <i>Bengaluru, India / Remote</i>
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- Developed and implemented **REST containerized microservices** using **Node.js** and **Express** for a logistics product, optimizing shipping processes and saving up to **\$100K annually**. Built front-end components with **React** and **Angular**, and managed databases with **PostgreSQL**.
- Enhanced **API performance** by implementing caching mechanisms for frequently accessed data, reducing response time by **40%** (from **900 ms** to **530 ms**) and lowering costs associated with third-party API calls.
- Utilized **AWS services (ECS, EC2, Lambda, API Gateway, Secrets Manager)** and deployed infrastructure via **CloudFormation** to maintain IaC. Enhanced security with **WAF**, automated secrets rotation, and secure **S3** access.
- Migrated logs from **Sumo Logic** to **New Relic**, cutting logging and monitoring costs by **75%** and consolidating monitoring capabilities into a single platform.
- Set up **GitLab Runner** and **CI/CD pipelines** and migrated services to **ECS**, improving deployment efficiency and reducing operational overhead.

<b>Graduate Teaching Assistant</b> University of Illinois Chicago	Aug 2024 – Present <i>Chicago, IL / On-site</i>
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- Grade **Software Engineering** assignments, projects, and exams, providing timely feedback on implementation quality, testing depth, and documentation.
- Facilitate **coding project demos**, guiding students through key technical concepts and development processes.
- Support students individually and in groups with **coding**, project requirements, and software engineering principles, including Git branching, CI checks, and code review etiquette.

## PROJECTS

<b>Tech Support for Older Adults – MS Project</b> Led a mixed-methods research study on older adults' preferences for video-based tech support vs. traditional methods, and developed an <b>automated system</b> that generates <b>image-based step-by-step guides</b> by using a foundational action model and extracting UI elements from YouTube tutorials using <b>OpenCV</b> . The tool improves accessibility by converting video content into a more user-friendly format.	Jan 2025 – May 2025
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**Technologies:** HCI, UX Research, OS-ATLAS, OpenCV, React, FastAPI

<b>LLM Training &amp; Deployment on AWS</b> Developed <b>LLM pipelines</b> on AWS using <b>Hadoop</b> for tokenization and <b>Spark</b> for training. Created a <b>REST APIs Akka HTTP</b> and deployed the microservice with <b>Docker</b> on <b>EC2</b> and <b>Lambda</b> , exploring scalable inference with <b>Ollama</b> .	Sep 2024 – Nov 2024
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**Technologies:** Scala, Hadoop, Spark, EC2, Lambda, EMR, Akka HTTP, Ollama

<b>Find Your Roof</b> Built a <b>full-stack web application</b> using <b>React</b> , <b>Next.js</b> , and <b>Supabase</b> to help unhoused individuals in Chicago find shelters, affordable rentals, and job opportunities. Focused on accessibility and user needs to support real-world impact.	Jan 2024 – Apr 2024
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**Technologies:** React, Next.js, Supabase, TypeScript, Tailwind CSS

## PAPER PUBLICATIONS

<b>How BYOD Sessions Support Ongoing Digital Engagement in Older Adults</b> (HCI, Interaction Analysis, Submitted to ACM ASSETS 2025) Conducted interaction analysis of <b>13 bring-your-own-device sessions</b> with <b>83 older adults</b> , identifying spatial formations and assistance types. Documented evolving motivations through peer interactions and privacy constraints. Co-authored a paper presenting <b>design considerations</b> for technology support tools for independent digital engagement and social support.	Apr 2025
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