VIBHA SUNEEL NAVALE

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EDUCATION

University of Illinois Chicago, IL Jan 2024 – Expected Dec 2025
Master of Science in Computer Science GPA: 4.00

RNS Institute of Technology, Bengaluru, India 2017 – 2021
Bachelor of Engineering in Information Science GPA: 9.08

TECHNICAL SKILLS

Frameworks & Technologies	React, Angular, Node.js, AWS, REST API, Express, SumoLogic, New Relic
Languages & UX Research	JavaScript/TypeScript, Java, Python, PostgreSQL, Mixed Methods Research
Tools	Git, Docker, Jira, Postman, DBeaver, Supabase, VS and VS Code, Jupyter Notebook

EXPERIENCE

Software Engineer Aug 2021 – Dec 2023
Cimpress *Bengaluru, India / Remote*

- Developed and implemented various **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 using **CloudFormation** to maintain infrastructure as code. 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.

Graduate Teaching Assistant Aug 2024 – Present
University of Illinois Chicago *Chicago, IL / On-site*

- 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

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

MindBridge Sep 2024 – Dec 2024
Led **user interviews** and **usability testing** to inform the design of a secure HCI system for streamlining patient histories in mental healthcare. Developed **high-fidelity Figma prototypes** focused on accessibility and workflow efficiency.
Technologies: HCI, Figma, React

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

PAPER PUBLICATIONS

Why They Come, How They Learn: Older Adults in Formal Learning Spaces for Digital Skills Apr 2025
HCI, Qualitative Analysis, Submitted to ACM ASSETS 2025
Analyzed recordings from 13 workshops with 83 older adults to study how spatial learning, instruction methods, and motivation shaped digital engagement. Applied **inductive and deductive codes** in a structured qualitative analysis and co-authored a paper on **design implications** for onboarding and education systems, focusing on sociomaterial factors, privacy, and user goals.