

SREELAKSHMI S B

UX Researcher specializing in AI Agents, XR (AR/VR) systems and Automotive Modeling.

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EDUCATION

University of Michigan, Ann Arbor, MI

August 2022 – May 2024

Master of Science in Human-Computer Interaction

Birla Institute of Technology and Science, Pilani

August 2015 – June 2019

Bachelor of Engineering in Computer Science

EXPERIENCE

MathWorks

January 2019 – June 2022

Leading developer of engineering simulation software, known for its flagship products, MATLAB and SIMULINK.

UX Researcher

- Led UX research initiatives for **3 major SIMULINK tools** ([Variant Systems](#), [Clone Detector App](#), and [Raspberry Pi Support Package](#)) widely used in **automobile system modeling and simulation**.
- Recruited research participants and facilitated **50+ usability tests, benchmarking studies, and customer interviews**.
- Led qualitative and quantitative research efforts to launch [Variant Manager 2.0](#), a tool for simulating design configurations and optimizing control system models. Partnered with design, engineering, and product teams to deliver a design that achieved up to **60× faster model execution times, accelerating vehicle control system development timelines**.
- Revamped the Clone Detector App with improved GUI features and 4+ new APIs, boosting model quality and code reuse in safety-critical environments. **Cut usability issues by 75%, streamlining model validation workflows** for automotive engineers.
- Designed and validated new features for hardware support packages in MATLAB and SIMULINK, **supporting rapid prototyping of automotive embedded systems**.

Center for Medical Innovations in Extended Reality

November 2024 – Present

NSF-funded research hub advancing the use of cutting-edge AR/VR technologies in healthcare.

UX Researcher

- Working with **15+ stakeholders (vendors/ manufacturers of medical devices, clinics/hospitals, and third-party service providers in the healthcare ecosystem)** to optimize the onboarding and use of AR/VR devices in medical institutions.
- Developing **optimized simulation-based clinical workflows**, reducing the time from identifying solution needs to onboarding and active use of XR devices.

IDEA Lab, University of Michigan

December 2024 – Present

Research lab dedicated to improving the usability of AI-based programming tools for blind and low-vision developers.

Researcher

- Co-developed accessibility heuristics for AI programming tools and ran evaluations of 4 popular AI-based coding tools (Copilot, Replit, Firebase Studio, and Jules) for validating the heuristics.
- Designing and developing a VS Code Extension to improve the discoverability and accessibility of IDE features for blind and low-vision (BLVI) users of VS Code.

ECS Fin

August 2024 – November 2024

Renowned financial software provider, providing transaction processing solutions for HSBC, BNY Mellon, Citi and others.

UX Researcher

- Designed and tested workflows for transaction communication tools used by global banks (HSBC, Citi), reducing the time for completion by 50%, improving settlement and payment handling efficiency.
- Designed solutions to handle and resolve message conflicts in Fedwire payments.

PUBLICATIONS

Accessibility Heuristics for Vibe Coding Interfaces

May 2025 - October 2025

Shalini Madan, Sreelakshmi Surabiyil Bindu, and Venkatesh Potluri. 2025. Accessibility Heuristics for Vibe Coding Interfaces. In *Proceedings of the 27th International ACM SIGACCESS Conference on Computers and Accessibility (ASSETS '25)*. Association for Computing Machinery, New York, NY, USA, Article 146, 1–5. <https://doi.org/10.1145/3663547.3759729>

SKILLS

- Research Methods:** Contextual Inquiry, Usability Testing, A/B Testing, Heuristic Evaluation, Survey and Interview Design, Diary Studies, Competitive Analysis, Journey Mapping, Mixed Method Analysis, User Recruitment, Data Annotation, Reporting.
- Tools for Research & Prototyping:** Qualtrics, UserTesting, UserZoom, Optimal Workshop, Dovetail, NVivo, Taguette, Airtable, Power BI, Miro, Notion, Figma, Photoshop, Illustrator.
- Programming & Simulation:** Python, R, SQL, MATLAB/SIMULINK, Unity, Bezi, Lens Studio, HTML, CSS, JS (React), C++.