

Rahul Hathwar

Software developer and digital artist. Computer Science and Mathematics student.

rahulhathwar.com/portfolio/ | <https://www.linkedin.com/in/rahul-hathwar/> | contact@rahulhathwar.com

Education

University of Wisconsin-Madison – Madison

Fall 2025

Computer Science, B.S.

- Completed course work on Java, C Language, Data Structures, Algorithm Analysis, Computer Engineering, Machine Programming, Assembly, Linear Algebra, Theoretical Calculus, Discrete Mathematics, Operating Systems, Database Engineering.
- Pursuing course work regarding UI/UX Development, Software Engineering Principles.

Technical Skills

- **Programming Languages:** Rust, Go, C, C++, Typescript, Javascript, Lua, Java
- **Software Libraries and Tools:** React, React Native, Next.js, Rocket Web Framework, Roblox Studio, Unreal Engine, Godot Game Engine, Docker, Git, Flutter, NGINX, Visual Studio Code, Kubernetes, Windows Subsystems for Linux, Bash, GCP
- **Databases:** CassandraDB, ScyllaDB, Redis, PostgreSQL, MySQL
- **Design Software:** Blender, Substance Painter, Affinity Designer, Adobe After Effects (Motion Graphics, Film VFX)
- **Office Software & Project Management:** Microsoft Office, ClickUp, Trello, Notion, Obsidian, Redmine, GitHub, GitLab

Experiences

Test Engineer Co-op @ *Extreme Engineering Solutions*

1/8/2024 – 8/23/2024

- Discovered and resolved a critical file system formatting bug in test procedures that caused automated test failures across multiple products, proactively documenting the issue and working with supervisors to update procedures.
- Developed and debugged 20+ automated test procedures, working with other teams to debug ambiguous and flawed instructions.
- Debugged and resolved a major **WSL** network drive mounts issue that was blocking development for multiple engineers, taking the initiative to research and document findings to aid the development of a long-term solution for the IT team.
- Enhanced internal **Python** tools to improve team efficiency regarding redundant workflows; Developed command line tools and **CI/CD pipelines** in **GitLab**.

Freelance UI/UX & Game Design Consultant

Present

- Negotiated and set pricing structures to maximize efficiency, ensuring clear expectations with clients and reducing scope creep.
- Led design and development for a battle royale game's UI/UX involving over 40 reusable components and 20+ screens, streamlining collaboration between multiple stakeholders through structured feedback loops, reference documentation, and live presentations.
- Balanced creative vision with technical feasibility by identifying early UX and performance issues and proactively adjusting designs to optimize for seamless game engine integration.

Assistant STEM Technology Instructor @ *Black Rocket*

Mid June – Mid August

- Designed and taught project-based STEM + Arts curriculum to students ages 7–11, covering Minecraft circuits, 3D modeling, and 2D animation. Researched and added a polygon-based 3D modeling software to the curriculum on-the-fly, significantly improving participation and positive feedback from both students and parents.
- Developed age-appropriate analogies and hands-on demos to explain concepts like event-driven programming and coordinate systems; Created on-the-spot visual aids and troubleshoot technical issues across game engines, code environments, and network configurations.

Projects

(more details and projects available on rahulhathwar.com/portfolio/)

Portfolio Website

- Built a highly interactive personal website with 10+ advanced configurable components using **Next.js**, **TypeScript**, **TailwindCSS**, and **Framer Motion**; Designed UI mockups and technical diagrams in **Affinity Designer** and **Figma**, demonstrating project design scheme and architecture as a proposal including high level ideas, technical details, estimated timelines, etc. for an independent C.S. study class.

Mock Microservices

- Modeled a microservice architecture for a talent acquisition platform by developing distributed systems, explored DevOps and containerization practices, server-side development, etc; Utilized Kubernetes, databases at scale, and cloud networking.
- Made a "Accounts" service with Rust implementing account creation, management API, two-factor authentication, Redis caching, etc.

24 Hour Hackathon Victories: **1st** @ MadHacks 2023 | **1st** @ NASA Space Apps | Prize Winner @ Hack Midwest 2024

- Led a pivot strategy during BadgerVision (an accessible face-recognition app for visually impaired users) when the team faced technical failures close to deadline, restructuring task delegation and boosting morale—resulting in a winning product.
- Designed Open Accessibility's UI/UX strategy, persuading the team to prioritize an aesthetically polished user interface, which was a key reason for the 1st-place victory (**1st out of 58**).
- Stars Sonification: Introduced melodic sonification concept using music theory; developed app that captivated judges from NASA and Northwestern University—leading to **1st place**.
- Implemented structured pitch preparation, dedicating time to refine presentations, rehearse delivery, and emphasize storytelling—helping the team stand out against competitors who neglected this step.