

Yusra Suhail

Software Developer | Human Computer Interaction | Machine Learning | IT consultant | Object Oriented Programming

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EDUCATION

University of Rhode Island, Kingston, RI

Master of Science in Computer Science

September 2023 - August 2025

Honors: GPA: **3.74/4.00**, Dean's List (every semester)

Relevant Coursework: Human Computer Interaction, Human Factors and Ergonomics, Accessible Design, Software Engineering, Machine Learning for Science and Society, Cloud Computing

Bachelor of Science in Computer Science, *Summa cum laude*, minor in Cyber Security

September 2019 - May 2023

Honors: GPA: **3.93/4.00**, Dean's List (every semester), Centennial Scholar

Relevant Coursework: Data Structures, Algorithms, Software Engineering, Database Management, Operating Systems

EXPERIENCE

University of Rhode Island, Kingston, RI

Graduate Research Assistant (Machine Learning for Socio-Technical Systems Lab)

January 2025 – Present

- Creating an LLM agent to leverage a novel task fairness library, enabling the agent to assess dataset fairness for model training
- Refactored library to streamline LLM tool interfaces, enabling the agent to offload more logic to the library resulting in reduced token usage by **35%** and improved runtime performance

Graduate Research Assistant (Human-Centered Experiential Technologies Lab)

August 2023 – Present

- Implementing an **ADA** compliant path feature for virtual polling place app, using mathematical and Geometry expertise, in an Agile environment to help election officials design physical voting spaces for US elections
- Conducting independent research on **font normalization** to support consistent font design and enable accurate remote font preference studies
- Measured on-screen font height in real-world units (cm) with **99%** accuracy for remote participants, using credit card calibration
- Developed a fault-tolerant JavaScript library that provides remote user screen heuristics and stores it in cloud-based distributed storage using Supabase (PostgreSQL), to support scalable and persistent data collection for remote user studies.

Graduate Research Assistant (Bioinformatics Lab)

July 2023 – August 2023

- Designed a mitochondrial variant analysis pipeline using Snakemake, enabling efficient mitochondrial DNA variant identification across any system that reduces analysis time by **60%**

Lead Information Technology Service Desk Consultant

September 2021 – May 2023

- Promoted to Lead in under **two** years for improving system maintenance, troubleshooting, and IT processes across departments.
- Administered Azure Active Directory, managing user/device access and resolving authentication issues
- Revamped the new hire onboarding process by **20%** by maintaining IT documentation

Undergraduate Research Intern

September 2022 – December 2022

- Refactored JavaScript & React-based web app, reducing redundant code by **70%** and improving usability for Psychology researchers analyzing data.

PROJECTS

[Rate My Professor Chatbot](#) | *Next.js, ReactJs, Material UI, Clerk, Pinecone*

November 2024

- Designed a scalable chatbot system using Retrieval-Augmented Generation (RAG) with Pinecone vector search and AWS, enabling real-time processing of Rate My Professor links for personalized responses.

[Study Stash](#) | *Next.js, ReactJs, Material UI, Firebase, Clerk, Rest API*

August 2024

- Created a full stack AI-powered flashcard app using REST APIs and Firebase for scalable data storage
- Implemented secure user authentication for reliable data management and accessibility

[Brooky Sale Website](#) | *HTML, JavaScript CSS, Three.js*

July 2024

- Engineered a dynamic, shareable invitation website with integrated music features, delivering a fully functional product within **24 hours** during the [Codecademy](#) Hackathon

[Anime Recommender System](#) | *Python, Pandas, Numpy, Sklearn*

October 2023 – December 2023

- Developed an Anime Recommender System employing collaborative filtering techniques of Machine Learning
- Implemented user-based filtering in python while exploring item-based methods for better recommendations

[Computational Geometry](#) | *C++*

January 2023 – July 2023

- Pioneered C++ libraries for point and segment creation to enable intersection detection via brute force and smart algorithm
- Used object-oriented design principles to implement geometric abstractions (e.g., Point, Segment) and smart pointer-based memory management.

SKILLS

Languages and Frameworks: JavaScript, TypeScript, Python, C/C++, SQL, Node.js, Next.js, Three.js, Rust, HTML/CSS, Java

Developer Tools: Git, Firebase, Clerk, Azure, AWS, OpenAI, Vercel, Supabase