



Mehul Maheshwari

mahesmeh002@gmail.com | 763-600-3041

EDUCATION

University of California, San Diego - M.S. Computer Science, Specialization in AI Sep 2024 - May 2026 (expected)

University of Wisconsin, Madison - B.S. Computer Science, Minor in Mathematics Sep 2020 - May 2024

- Awarded Comprehensive Honors for distinctions in the CS major and in the College Letters & Sciences
- GPA 3.8/4.0

EXPERIENCE

(1) Research Assistant, University of Wisconsin-Madison, 2023-Present
under Professor Jacob Thebault-Spieker with the Collaborative Computing Group

Overview

- Independently developed a full-stack platform to streamline experiment creation for researchers, automating the process of creating and analyzing multiple experiments simultaneously to facilitate meta-analysis and bridge information gaps.
- Featured at the Conference on Human Computation and Crowdsourcing.

Development

- Developed dynamic frontend pages and implemented scalable database structures to model the complexities of distinct experiments, stimuli, and participant responses.
- Used AWS's Mechanical Turk APIs, EC2's Virtual Machines, and Route 53.
- Migrated the database from SQLite to PostgreSQL after identifying shortcomings in the production environment.

(2) Technology Development Intern at OPTUM through United Health Group 2022-2023

- Saved over \$300,000 by collaborating in a team to develop a full-stack in-house software system which eliminated dependency on third-party software.
- Automated backlog reporting and data analysis, which reduced reporting time to stakeholders.
- Assisted in creating an artificial intelligence tool for diagnosing patient illnesses.

(3) Research Assistant, University of Minnesota 2018-2019
under Professor Victoria Interrante

- Created a 3D virtual environment which investigated the relationship between the field of view and cybersickness.
- Presented "Enhancing Spatial Perception and Presence in Immersive Virtual Environments," which was awarded by the Minnesota Department of Education: Scholars of Distinction - Meritorious.

PROJECTS - Additional projects can be found on my resume page: <https://mehulmaheshwari.com/resume>

(4) Sign Language Learner

- Developed an AI model for sign language detection in a team; achieved 99.5% accuracy without overfitting, surpassing baseline models that achieved 96% accuracy.
- After experimenting with model architectures, we selected and optimized a ResNet50-based model using transfer learning.
- Enhanced model robustness by augmenting training data for better accuracy on rotated/scaled images.
- Reduced training times by processing images in grayscale instead of RGB.

(5) Madtown Bhangra

- Independently developed a website that attracted sponsors and generated \$5,000 in revenue within four months.
- Implemented responsive design and UX principles, including rapid prototyping and expert evaluations.
- Optimized site performance with lazy loading for media content.
- Utilized Google Analytics to refine user engagement and site interaction.

SKILLS

- (1) Django, Python, Next.js, AWS Tools: EC2, Route53, SQLite, PostgreSQL, Unicorn, Nginx
- (2) Full Stack, React, Spring Boot, Github Actions, Docker, Kubernetes, HTML5, Java, PowerBI, Snowflake, MySQL
- (3) Unity/Unity 3D, Blender, WebGL
- (4) Tensorflow, PyTorch, Python, Jupyter, Keras, Kaggle
- (5) HTML, JavaScript, Bootstrap, SEO, VCS, UX Design, Accessibility Design