

# Ming H. Wang

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## EDUCATION

### University of Wisconsin at Madison

Madison, WI

*Computer Science and Economics*

*Expected Graduation: May 2026*

- Coursework: Operating Systems, Algorithms, Building User Interface, Database Management, Big Data, Intro to AI, Data Analytics for Economists, Money and Banking

## SKILLS

- **Languages:** Python, Java, SQL, JavaScript, C++
- **Version Control:** Git, GitLab
- **Operating Systems:** Linux, Windows
- **Tools & Technologies:** Docker, Spark, React.js, RPC, Cassandra, Google Cloud, Tableau, ArcGIS Pro

## EXPERIENCE

### Undergraduate Researcher

September 2024 - Present

*Spatial Computing and Data Mining Lab*

*Madison, WI*

- Conducting machine learning models for streamflow prediction, analyzing hydrological patterns in large-scale river networks.
- Implementing Empirical Mode Decomposition to extract Long Short-Term Memory and improve flood prediction accuracy
- Processing over 5GB of high-resolution spatiotemporal data using PyTorch and parallel computing techniques
- Optimizing data imputation models, enhancing prediction accuracy by 15%, reducing error rates in missing environmental data

### Peer Mentor/Teaching Assistant

January 2023 - December 2023

*UW-Madison*

*Madison, WI*

- Held 15+ office hours weekly to provide support for students in Java/Python programming courses, ensuring effective assistance
- Assisted over 500 students each semester, guided them through coding challenges, debugging, and refining their solutions
- Participated and delivered lesson discussion and presentations to reinforce core programming concepts, facilitating active learning
- Received positive feedback from over 250 students for clear and effective communication and personalized support

## PROJECTS

### Personal Portfolio | [Link](#)

- Developed a responsive personal website using React to showcase projects and experience with a focus on clean UI/UX design
- Utilized cross-device compatibility and seamless navigation, allowing users to access the site effortlessly on desktops, tablets, and mobile devices

### Machine Learning Projects | [Link](#)

- Enhanced decision-making speed by 25% in Tic-Tac-Toe using the Minimax, Alpha-Beta pruning computing via multiprocessing
- Achieved over 90% accuracy in image classification using Convolutional Neural Networks (CNNs) to identify potential matches by generating photorealistic faces based on key descriptions and facial features

### Database Management | [Link](#)

- Designed and implemented a relational database schema in MySQL to store and efficiently query large-scale eBay auction data
- Transformed over 900KB large JSON datasets into structured relational data, executing SQL queries for advanced analytics

### Health Insurance in America | [Link](#)

- Analyzed 10 years of U.S. health insurance data using Census Bureau's APIs, uncovering trends in coverage disparities
- Leveraged Matplotlib, Seaborn, and GeoPandas to create interactive time-series geospatial visualizations, providing insights into healthcare spending inequalities