

# Jason Ma

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## EDUCATION

University of California, Irvine | Bachelors of Science in Computer Science | GPA: 3.66/4

Sep 2024

East Los Angeles College | Associates in Mathematics | Magna Cum Laude

Jun 2022

## EXPERIENCE

Machine Learning Researcher | UC Irvine

Jul 2024 – Present

*Project with UCI Prof. Ahmed, NASA JPL's Dr. Nick LaHaye, Climate Change AI*

Pandas | Matplotlib | Scikit-Learn | X Array

- Participating in a Remote Sensing project, leveraging NASA's PACE satellite data to predict environmental changes through machine learning, focusing on the ecological effects of animal migration patterns on algal blooms and vegetation dynamics.
- Developing a geospatial ETL pipeline that integrated raw GPS data from animal tracking with sensor readings from PACE-OCI. Utilized advanced data processing techniques like geohashing and geocube to manage and prepare large datasets for machine learning analysis, employing the Earth Access API and NetCDF processing with X Array/GeoPandas.
- Implementing an automated system for Land Use and Land Cover (LULC) datasets for semantic segmentation applications. The system features robust data handling strategies including data imputation, pixel normalization, effective cloud masking, and generation of segmentation masks in COCO format, enhancing the effectiveness of machine learning models.

Teaching Assistant | UC Irvine

Jan 2024 – Mar 2024

*Reader for UCI Prof. Nawab, CS 122A – Introduction to Data Management*

MySQL | DBMS | Relational Design Theory/Algebra

- Managed the assessment and grading of assignments, projects, and exams for 200+ students, ensuring accuracy and fairness in evaluation.
- Provided structured feedback and detailed clarifications on incorrect responses, effectively improved understanding and contributed to consistently high academic performance.

## PROJECTS

CalmFlowBalance | A Health & Wellness App | Developed in Swift

Apr 2024 – Jun 2024

- Developed an iOS wellness application using Swift and HealthKit, featuring meditation guidance, step tracking, and sleep monitoring to provide users with customized health insights.
- Integrated the OpenAI API to enhance user's feedback with more detailed and personalized workout recommendations, improving user engagement, customization, and health.

Memory Masters | Interactive Memory Game with Hand Tracking | Angular

Jan 2024 – Mar 2024

- Engineered an interactive web-based memory game using Angular and Handtrack.js, designed to enhance cognitive skills in children and support memory retention in elderly users through engaging and varied gameplay challenges.
- Integrated intuitive gesture controls with Handtrack.js, enabling user interaction through custom hand gestures, thereby improving accessibility and user engagement across diverse age groups.

## SKILLS

- **Technical Skills:** Java, JavaScript, Python, C++, C, HTML, CSS, React, Redux, MySQL, Swift, TypeScript, NodeJS, Version Control: Git, DevOps: CI/CD, API Testing: Postman
- **Analytical Skills:** Problem Solving, Logical Thinking, System Design, Optimization, Debugging, Troubleshooting
- **Tools:** CI/CD, Unit Testing, Software Development, Microservices, DBMS, Full-Stack, Eclipse, JetBrains, Object Oriented Programming, Data Structures, Algorithms
- **Microsoft Tools:** Word, Excel, PowerPoint, Teams, Outlook, Visual Studio IDE, Microsoft Project

## CERTIFICATIONS

Developing Front-End Apps with React | Coursera – IBM

Jul 2024

Getting Started with Git and GitHub | Coursera – IBM

Jul 2024

Introduction to Cloud Computing | Coursera – IBM

Jun 2024