

Mel Avina-Beltran

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EDUCATION

UNIVERSITY OF CALIFORNIA, DAVIS, B.Sc. in Applied Mathematics

December 2023

TECHNICAL SKILLS

Languages: Python, R, SQL, Javascript

Frameworks and Libraries: scikit-learn, TensorFlow, PyTorch, Keras, Cytoscape.js, Flask, Bootstrap

Tools and Platforms: MongoDB, Google Apps Script, Git, React, Node.js, IXL

Core Skills: Data Science Methodologies, Machine Learning, Data Visualization, Process Optimization, Effective Communication

EXPERIENCE

5th Grade Homeroom, Math and Science Teacher, Making Waves Academy

August 2024 - Present

- Delivered 8 math and 3 science units to ~60 students in a high-need demographic setting (86% Hispanic/Latino; 81.5% socioeconomically disadvantaged).
- Applied IXL analytics to monitor performance, achieving ≥ 1 grade level growth in math across cohorts.
- Built and maintained progress-tracking systems, intervention logs, and pacing guides to optimize instruction and improve data visibility.
- Coordinated assessment cycles, stakeholder communications, and classroom project management to drive measurable learning outcomes.

Junior Software Developer at CODELAB

January 2023 - June 2023

- Developed a web platform for UC Davis course selection, integrating grading distribution and enrollment statistics with React, JavaScript, and Node.js, improving user experience and functionality.
- Managed a team of 4 through the product life cycle, enhancing UI/UX and implementing search filters and saving options.
- Utilized Python and MongoDB to manage backend operations, ensuring seamless integration with front-end features.

Junior Software Developer at UC DAVIS MATH DEPARTMENT

January 2022 - June 2022

- Created a Google Sheets extension using JavaScript to simulate infectious disease models, enhancing user experience by 60% through improved data visualization.
- Leveraged Cytoscape.js and Google Apps Script to provide intuitive graphical representations, aligning with educational objectives.
- Collaborated with professors to ensure the extension met course requirements and contributed to academic goals.

PROJECTS

WNBA Matrix for ARTIFICIAL INTELLIGENCE STUDENT COLLECTIVE

September 2023 - Present

- Developed a predictive model for WNBA game outcomes with 70.4% accuracy, employing data cleaning, feature selection, and model training techniques.
- Created a Flask web application with Bootstrap to predict game winners using comprehensive statistics, including teams that hadn't faced each other directly.

Network Anomaly Detector for ARTIFICIAL INTELLIGENCE

August 2023

- Led a team of 5 in engineering a deep autoencoder neural network using Python, TensorFlow, and Keras, processing a 19,528-sample dataset.
- Achieved 92% real-time detection accuracy by implementing Min-Max scaling and rigorous data preprocessing techniques.