

# JONATHAN MACOCO

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## EDUCATION

### Masters of Science, Computer Science

San José State University, San José, California

Expected: May 2026

### Bachelor of Science, Computer Science

Chico State University, Chico, California

May 2023

- GPA: 3.3

## TECHNICAL SKILLS

Programming Languages: C, C++, Python, JavaScript, Java, R, HTML5, CSS, Dart

Tools/Technologies: Git, Linux, AWS, GCP, Flutter, React, Django, Docker, OpenMP, MPI, Tailwind, Bootstrap

Database: SQL, MongoDB, Firebase

Skills: Database Design, Agile Project Management, Problem Solving, Communication, Quantitative Analysis, OOP

## EXPERIENCE

### Full Stack Software Engineer, Coinable, Remote

Feb 2024 - Jun 2024

- Implemented email verification system utilizing Amazon Simple Email Service, resulting in reliable and secure communication within seconds for a seamless user authentication, for up to 50,000 users
- Devised a RESTful API for efficient retrieval, storage, and updating of database records, delivering streamlined data management and scalability
- Formulated and implemented database architecture in MongoDB resulting in efficient data management and organization
- Built and managed a reverse proxy server using NGINX to efficiently route HTTPS requests to backend MongoDB database, optimizing performance and security

### Computer Science Expert AI Training, Scale AI, Remote

May 2023 - Feb 2024

- Trained machine learning models how to code in Python and C, resolving issues during training
- Conducted thorough code evaluations for machine learning models, increasing efficiency
- Documented and delivered clear explanations of model output, resulting in model improvement

## PROJECT EXPERIENCE

### Stock Market Predictor Website

- Designed a full-stack web app in Django, to predict closing stock values, aiding users with investment strategies
- Engineered a model in Python utilizing an LSTM neural network, providing future stock prices based on stock trends
- Conducted quantitative analysis on LSTM model, evaluating performance utilizing RMSE, assisting in error reduction
- Integrated portfolio analysis comparing user portfolios to projected portfolio values, helping optimize investment strategies

### Movie Match

- Devised a full-stack web chat app using React, employing an algorithm allowing users to be matched according to movie preferences
- Incorporated Firebase to securely store user and movie data, creating reliable accessibility and robust data management
- Integrated TMDB API to dynamically fetch data, ensuring users get latest movies

### Plant Social

- Led collaboration as a scrum leader in creating and building a social application, ensuring sprint deadlines were met
- Designed intuitive front end interfaces with Flutter enhancing UI
- Integrated Firebase functionality to efficiently retrieve, manage and store user data, producing a seamless user experience
- Developed camera functionality, sending image data to MobileNetV3Small machine learning model used to classify plant images with high accuracy

### Factoring a Large Semi prime

- Parallelized code leveraging C++ with OpenMP, resulting in a 28% speed up
- Implemented character array to store large prime numbers, ensuring efficient memory usage
- Employed prime density analysis and Sieve's algorithm to generate a list of prime numbers