# Nicklaus Marietta

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## Professional Summary

Computer Science student at California State University, Fullerton graduated in May 2026 with experience in machine learning research, full-stack development, and software engineering. Proven ability to build and deploy scalable applications, develop ML models, and collaborate on cross-functional teams. Award-winning project experience with strengths in Python, JavaScript, React, TensorFlow, and cloud technologies. Passionate about delivering impactful software solutions to real world problems.

## Education

**California State University, Fullerton** Aug 2022 - May 2026

*Bachelor of Science in Computer Science* *Fullerton, CA*

- **Relevant Coursework:** Data Structures, Algorithm Engineering, Software Engineering, Front End Web Engineering, Operating Systems, File Structures and Database Systems

## Experience

**Raytheon Applied Signal Technologies** August 2025 - May 2026

*ML Research Engineer Intern* *Fullerton, CA*

- Built an RNN-based receiver in TensorFlow/Keras to demodulate BPSK and QPSK signals under impaired channel conditions, achieving 0.01 loss on QPSK, contributing to features under patent consideration by Raytheon Technologies.
- Trained models across multiple simulated channel environments to improve baud lock and signal-transition detection, increasing classification robustness by 30% over the baseline DSP approach.
- Integrated the ML receiver with Raytheon's Signal Generator hardware, validating consistent model performance across controlled real-world signal scenarios, bridging software and hardware interfaces.
- Awarded Best Computer Science Project at Cal State Fullerton's Engineering Expo 2026.

**CIC PCUBED** May 2025 – June 2025

*Data Science Research Assistant* *Fullerton, CA*

- Engineered and benchmarked 4 ML models (Logistic Regression, Decision Tree, Random Forest, K-Means Clustering) on a 1,000+ record dataset to predict student GPA, achieving 85%+ accuracy with the best-performing classifier.
- Documented model evaluation methodology and maintained version-controlled code in Git, presenting findings to faculty and a peer cohort of 100.

## Projects

**EcoNauts** | *ReactJS, Tailwind, FastAPI, Docker, Scikit-learn, Mapbox* April 2025

- Won **1st Place** in the "Eco-Friendly" category at FullyHacks 2025 (**50+ teams**) by designing and shipping a full-stack ML web application in **24 hours**.
- Trained a Scikit-learn regression model on a Kaggle dataset of environmental data (wind patterns, energy yield) to generate predictive sustainability scores for geographic locations.
- Built and containerized a FastAPI REST service with Docker to serve model predictions, enabling seamless deployment and reproducible environments.

**SilverWare** | *Django, Python, ReactJS, JSON, AWS, SQLite* February 2024 - May 2024

- Created a restaurant management web app for a class project by designing backend APIs using Django and SQLite.
- Built an interactive and responsive UI using ReactJS, leveraging React Hooks for component-based development.
- Spearheaded sprint planning and task delegation for a **5-person** Agile team, delivering on time across a 3-month development cycle.

## Technical Skills

**Languages**: Python, JavaScript, C++, Svelte, Java, HTML/CSS, SQL, TypeScript, .NET, C#
**Technologies/Frameworks**: ReactJS, SvelteKit, Node.js, Express.js, Tailwind CSS, Bootstrap, Flask, REST APIs, Docker, MySQL, PostgreSQL, NoSQL, TensorFlow, Numpy, Matplotlib
**Developer Tools**: Git, VS Code, Visual Studio, CI/CD pipelines, TDD/BDD, AWS, Google Firebase, Google Cloud Platform, MongoDB, Jupyter Notebook, Google Colab, Linux, WSL