

# Jay Buensuceso

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## EDUCATION

<b>University of California, San Diego</b> <i>B.S. Cognitive Science Machine Learning and Neural Computation Computer Science Minor</i> <b>Coursework:</b> Data Structures, Python, Java, C/C++, Shell Scripting, Deep Learning, Neural Networks, Supervised and Unsupervised ML	Graduated Mar 2024
<b>San Diego Miramar College</b> <i>A.S. Pre-Engineering Studies</i>	Graduated May 2021

## WORK AND ORGANIZATION EXPERIENCE

<b>Research and Development Engineer</b> <i>Qualcomm Institute</i>	April 2024 – Nov 2024 San Diego CA
Developed a scalable, web-based digital bulletin system using NextJS, Express.js, and PostgreSQL to serve real-time makerspace data. Built and deployed RESTful APIs using TypeScript, enabling scalable communication between front-end and backend services. Created UI based on internal design discussions, following patterns aligned with Figma-style mockups and user flow diagrams. Worked with Git in a collaborative environment using branching strategies, pull requests, and code reviews.	
<b>Makerspace Student Sta</b> <i>Qualcomm Institute</i>	Mar. 2023 – Mar. 2024 San Diego CA
Developed a Python-based check-in and database system to track 400+ users, improving accuracy and equipment safety compliance by 75 percent. Provided technical oversight for 3D printers and laser cutters, decreasing downtime by 30 percent through preventive maintenance. Acted as technical mentor for youth STEM programs (e.g., COSMOS), delivering equipment training and project support.	

## TECHNICAL PROJECTS

<b>AniTrack - Japanese Anime, Manga, and Video Game Tracker</b> <i>Fullstack NextJS Project</i>	Personal Project August 2024
Developed a full-stack web application using TypeScript, React, and Node.js. Implemented secure login and real-time data sync, optimized for both desktop and mobile users. Wrote unit tests to improve system reliability and maintainability. Designed and optimized database schema for scalability and performance. Currently prototyping a React Native/Expo dedicated app to extend the experience to iOS/Android users.	
<b>Proxy Reader - Web-based Image Proxy Reader</b> <i>Frontend NextJS Project</i>	Personal Project April 2025
Developed an image proxy reader that takes imgur albums or specially formatted github gists and presents them in a clean mobile-friendly manga-oriented reader. Implemented performance optimization for long-form content rendering, focusing on UX clarity.	
<b>Shoe Recommendation System in Python</b> <i>Unsupervised Machine Learning</i>	Academic Project March 2024
Created a recommendation engine using T-SNE, UMAP, and agglomerative clustering on Zappos50K dataset. Applied ML dimensionality reduction and visualization to derive product-group insights.	

## TECHNICAL SKILLS

**Languages:** JavaScript, TypeScript, Python, Java  
**Frameworks:** React, NextJS, Node.js, Express.js  
**Databases:** PostgreSQL, Supabase, Firebase  
**Developer Tools:** Bash, Git, CI / CD, Github Actions  
**ML Skills:** PyTorch, TensorFlow, SVM, CNNs, RNNs, VAEs, HMMs, Agglomerative Clustering, T-SNE, UMAP