Jay Buensuceso

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Education

University of California, San Diego Graduated Mar 2024
B.S. Cognitive Science, Machine Learning and Neural Computation, Computer Science Minor

San Diego Miramar College Graduated May 2021
A.S. Pre-Engineering Studies

Work and Organization Experience

Research and Development Engineer April 2024 – Nov 2024
Qualcomm Institute *San Diego, CA*

- Produced a web-based makerspace digital bulletin and informational display to provide up-to-date information of the makerspace and the various projects it had on display using NextJS, ExpressJS, and PostgreSQL.
- Utilized additive manufacturing (3D printing) and traditional subtractive manufacturing techniques in assisting rapidly prototyping innovative concepts for university researchers.

Makerspace Student Staff Mar. 2023 – Mar. 2024
Qualcomm Institute *San Diego, CA*

- Contributed to the design and deployment of a custom check-in system for logging over 400 unique users of the makerspace written in Python with Tkinter.
- Oversaw summer programs such as the Jacob's School of Engineering's California State Summer School for Mathematics and Science (COSMOS) program, enabling students to utilize makerspace equipment safely and efficiently.
- Maintained the 3D printers and laser cutters to increase efficiency.

Vice President Internal and Structures Subteam Lead Sept. 2021 – June 2024
Rocket Propulsion Laboratory *San Diego, CA*

- Coordinated a team of 14 students to design and manufacture the internal and external composite structure to improve the composite aeroshell and decrease the weight by 20 pound in dry mass.
- Oversaw the planning and execution of organization-wide internal events and tabling events to increase recruitment interest and maintain the team's retention rate.

Academic and Personal Projects

AniTrack - Japanese Anime, Manga, and Video Game Tracker Personal Project
Fullstack NextJS Project *May 2023*

- Deployed a fullstack NextJS webapp for anime, manga, and video game tracking with full messaging and social networking functionality.
- Developed an implementation of a real time session.

Shoe Recommendation System in Python Academic Project
Unsupervised Machine Learning *March 2024*

- Project Link: https://github.com/flashruler/Shoe-Recommendation-using-T-SNE-and-UMAP
- Designed a shoe recommendation algorithm that utilized a combination of T-SNE and UMAP dimensionality reduction and agglomerative clustering on the Zappos50K dataset.

Technical Skills

Languages: Python, Java, C++, JavaScript, MATLAB, HTML/CSS
Frameworks: Tensorflow, Pytorch, Scikit-learn, Seaborn, Keras, Pandas, OpenCV, Node.js, NextJS, ReactJS, ThreeJS
ML Skills: Generative Models, Variational Autoencoders, Hidden Markov Models, Gradient Descent, Classification, Support Vector Machines (SVM), Recurrent Neural Networks, Convolutional Neural Networks
Developer Tools / Technologies: Bash Scripting, Git, Visual Studio Code, AWS S3, PyCharm, IntelliJ, Jupyter Notebook