GEN TAMADA

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EDUCATION

University of California, Santa Barbara (UCSB) **Expected June 2025**
Bachelor of Science (B.S.) Computer Science Candidate (Dean's Honors) **Cumulative GPA: 3.97**
Class Taken: Data Structure & Algorithms, Operating Systems, Computer Networks, Computer Architecture

INTERNSHIP EXPERIENCE

Aquimo LLC., Remote (tinyurl.com/aquimo-light) June 2023 - September 2023
Software Engineer Intern

- Worked in development team in creating light-weight mobile games and apps hosted on websites, using Cocos Game Creator
- Standardized a method in **Javascript** for users to access any cocos games on their home screen without using app stores
- Optimized the **Javascript** URI parsing algorithms to allow developers with little coding experience to use query strings
- Prepared the basic implementation to be tested on the Pre-season football game between Chicago Bears and Indianapolis Colts

SOAR Foundation, Remote (gen8009.wixsite.com/soar-foundation) June 2022 - September 2022
Software Engineer Intern

- Created a new website for SOAR in 2 weeks using the platform of **Wix**; eliminated unnecessary components of the original site, emphasized the important information, and simplified the web-user-interface for the users
- Proposed the plan for replacing the original **Wordpress** site of SOAR Foundation to one powered by **React.js**
- Listed the pros and cons of the overall switch and the necessary procedures needed to achieve the new **React.js** site

PROJECTS

Refract, UCSB Data Science Club (github.com/heyyysus/refract) January 2024 - May 2024
Machine Learning Model Engineer

- Devised a ML solution to cloak facial images to mitigate risks associated with unauthorized use in Deepfake creation
- Implemented model in **PyTorch** and fine tuned the model after its fifth iterations to improve the result of the face cloaking
- Utilized pre-trained models like **Inception Resnet V1**, **MTCNN,** and **LPIPS** to manipulate image embeddings and introduce undetectable alterations that prevent misuse in machine learning applications
- Engineered specialized loss function to maintain a balance between image similarity and security

KOS, UCSB Operating Systems course (CMPSC 170) (tinyurl.com/cs170kos) January 2024 - March 2024

- Developed a fully functional operating system in **C**, designed to run on a **MIPS** R3000 32-bit processor simulator
- Implemented core functionalities of **Linux** including process management commands such as fork, exec, pipe, and dup
- Engineered a scheduler to manage process control blocks (**PCBs**), effectively handling program registers, file descriptors, and child processes to support parallelism and resource management

Noteblockit, UCSB Data Science Club (github.com/Ononymous/Noteblockit) January 2022 - April 2023
Project Team Leader

- Invented a solution that allows an accurate conversion of any music file (wav file) into noteblock systems in Minecraft
- Researched and compared more than 10 different implementations of Music Source Separation using machine learning, and used Python libraries such as **Librosa** and **Numpy** in **Google Colab** for data manipulation and storage
- Implemented a recurrent neural network model in **PyTorch**, and trained 3 separate sets of parameters for bass, vocals, and drums
- Hosted the model on **Streamlit** Community Cloud; fine-tuned the model to fit the memory usage limit on **Streamlit**

SKILLS

- **Technologies:** React.js, React Native, Vue.js, Javascript, HTML/CSS, Java, MIPS, C++, R, Cocos Game Creator
- **Python libraries**: Numpy, Scipy, PyTorch, TensorFlow, Librosa, Streamlit
- **Data related**: Firebase, Moralis database / hosting, Supabase
- **Spoken Languages:** Fluent in English, Chinese, and Japanese