ENRIQUE ARANDA

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OBJECTIVE

Fourth-year Computer Science undergraduate searching for an internship position at a smaller company where I can apply my skills as a Data Scientist or Machine Learning Engineer in the biological or neurological landscape.

EDUCATION

University of California, San Diego **La Jolla, CA**

Bachelor of Science in Computer Science, Minor in General Biology Expected June 2026

GPA: 3.0/4.0

SKILLS

Languages: Python, Java, C, C++, HTML, CSS, JavaScript, SQL, ARM assembly, SystemVerilog, TypeScript

Developer Tools: Git, VSCode

Framework: React, Node.js, JUnit

Libraries: NumPy, pandas, Spotify API, Scikit-Learn, Matplotlib, miditoolkit, PyTorch, FluidSynth

PROJECTS

Custom Reduced Instruction Set Computer (RISC) Processor July 2025 – August 2025

Technologies: Python, ARM assembly language, SystemVerilog, C

- I led the project by outlining our RISC processor architecture with fixed 9-bit instructions and 8-bit data for eight general purpose registers
- I helped my teammate assemble our processor components in SystemVerilog and I created a Python-based assembler to convert ARM functions into the processor's custom machine code
- We successfully implemented a functional custom processor and its toolchain in one month, allowing the execution of machine instructions from ARM functions to produce desired outputs

Music Generation with Recurrent Neural Networks (RNNs) May 2025 – June 2025

Technologies: Python, PyTorch, miditoolkit, FluidSynth

- I designed a symbolic music generation model for my team using RNNs with Musical Instrument Data Interface (MIDI) datasets as input
- I helped incorporate miditoolkit to extract musical features from data such as pitch, duration, note sequences
- I improved the RNN model's accuracy by 12% through hyperparameter optimization and our final result was a unique piece of music

Moody Melodies September 2024 – December 2024

Technologies: HTML, CSS, Typescript, Spotify API, React

- I led the backend development of our React app, which aimed to input a user's feelings and desired instruments to produce a playlist using Spotify API catered to their feelings
- I designed a recommendation system by mapping specific feelings to parameter values on the Spotify API
- I mentored teammates on the functionality of Spotify API to bridge the frontend to backend to complete a swift, deployable product with quality results

ORGANIZATIONS

Big Back Club - Co-Founder

Triton NeuroTech - Project Member

Undergraduate Bioinformatics Club - Member

Society of Hispanic Professional Engineers - Member

ACM at UC San Diego - Member