

# Kendrick Nguyen

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## EDUCATION & AFFILIATIONS

### University of California, San Diego

*B.S. Electrical Engineering | Minor in Cognitive Science*

- Concentration depth in Computer System Design

**Graduation Date: June 2024**

Fourth Year

### University of California, San Diego

*M.S. Electrical Engineering*

- Research area in Machine Learning & Data Science

**Graduation Date: June 2026**

Incoming Fall 2024

### Project in a Box (PiB)

*Technical Lead, former Engineering Chair and Project Space Manager*

- Organization established to foster hands-on experience through standalone projects and workshops, impacting +200 students yearly.
- Attended weekly agile meetings in planning outreach opportunities and technical workshops.

**December 2020 – Present**

## WORK EXPERIENCE

### ECE Makerspace Lab Assistant

*ECE Department*

- Trained students, staff, and faculty in the safe use of machines and tools (such as 3D printers, laser cutter, electronics tools, hand tools, etc.).
- Implement a backend server using Flask and ngrok to create APIs and webhooks to internally record equipment sign-ins and externally update Fabman's member management system service.

**October 2023 – Present**

### Technician & Data Analyst

*The Basement*

- Mentored +12 student startups working in the prototyping lab, providing technical support, workshops, and materials.
- Designed a custom API and package to automate ETL processes for Office of Innovation & Commercialization and The Basement events.

**April 2023 – Present**

### Product Support Engineer Intern

*Northrop Grumman Aeronautics Systems*

- Optimized the Failure, Reporting, Analysis, and Corrective Action System (FRACAS) process to improve and facilitate transparency of DoD maintenance data for reliability engineers.
- Designed a stacked machine learning model using TensorFlow and AWS Sagemaker's pipelines to predict failure modes in the FRACAS process.

**October 2022 – September 2023**

### ECE Department Tutor

*ECE 5 Making, Breaking, and Hacking Stuff*

- Instructed students with labs encompassing microcontrollers, communication, digital signal processing, and embedded systems and control.
- Fabricated boilerplate line-following robot chassis for students' final project competition, equivalent to ~800 hours of 3D-printing.

**August 2021 – December 2022**

### Research Internship

*ECE Spring/Summer Research Internship Program*

- Developed ECE-based labs engaging skills, such as Arduino, circuits, soldering, and signal processing, for high school students.
- Compiled student feedback from weekly surveys; performed data and word pattern analysis in students' responses using Pandas and NLP.

**March 2021 – August 2021**

## PROJECTS

### Mood Mesh

- Designed an ubiquitous mood enhancing smart light system that dynamically adjusts colors and brightnesses based on biometric data collected from a Samsung Galaxy Watch and processed on a web server.
- Formulated a RESTful architecture between the smart watch's android application, a Flask application hosted on Raspberry Pi, and the smart lights.

**September 2023 – December 2023**

### IoT Geo-Logger

- Prototyped a car plug-in device, fabricated from a custom 4-layer PCB embedded with an ESP-IDF microcontroller and LoRa GPS module.
- Aggregated geolocation data from AWS IoT Core to compute and display car-trip infographics on an iOS app, developed in PlatformIO and SwiftUI.

**August 2022 – May 2023**

### Graduate School Prediction System

- Generated a machine learning model to predict probability of admission for 1000 different universities based on features, such as GRE scores, undergraduate GPA, and university ranking.
- Performed Exploratory Data Analysis (EDA) in conjunction with grid search model selection and recursive feature selection, achieving test accuracy of 95%.

**January 2023 – March 2023**

### Object Tracking Web Server

- Implemented a motorized object tracking application on a Raspberry Pi, querying image, timestamp, and GPS data through a PostgreSQL database.
- Debugged a closed-loop PID control system that automatically tunes motorized camera tracking and gain parameters.

**January 2022 – March 2022**

## SKILLS

- **Hardware Tools/Platforms:** Autodesk Inventor, Fusion 360, Nastran, SolidWorks, OrCAD PSpice, Altium Designer, EAGLE.
- **Lab Equipment:** Oscilloscopes, Function Generators, Logic Analyzers, Soldering (Iron and Reflow), 3D-Printers (FDM and SLA).
- **Languages:** C, C++, R, Python, ARM Assembly, HTML/CSS, JavaScript, SystemVerilog, MATLAB.
- **Software Tools/Technologies:** MySQL, PostgreSQL, REST APIs, Flask, FastAPI, NumPy, Pandas, scikit-learn, PyTorch, Pytest, Git.