Kendrick Nguyen

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EDUCATION & AFFILIATIONS

University of California, San Diego **Graduation Date: June 2024**
B.S. Electrical Engineering | Minor in Cognitive Science Fourth Year
- Concentration depth in Computer System Design

University of California, San Diego **Graduation Date: June 2026**
M.S. Electrical Engineering Incoming Fall 2024
- Research area in Machine Learning & Data Science

Project in a Box (PiB) **December 2020 – Present**
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.
- Attend weekly agile meetings in planning outreach opportunities and technical workshops.

WORK EXPERIENCE

Technician & Data Analyst **April 2023 – Present**
UCSD: The Basement
- Mentored +12 student startups working in the prototyping lab, providing technical support, workshops, and materials.
- Designed a software package to automate ETL processes for Office of Innovation & Commercialization and The Basement events.

Product Support Engineer Intern **October 2022 – September 2023**
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.

ECE Department Tutor **August 2021 – December 2022**
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.

Research Internship **March 2021 – August 2021**
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.

PROJECTS

IoT Geo-Logger **August 2022 – May 2023**
- 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.

Graduate School Prediction System **January 2023 – March 2023**
- 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 model selection among various supervised base models, achieving a final model accuracy of 95%.

RC Bumper Car **January 2022 – May 2022**
- Designed and documented a laser-cut RC car project, soon to be implemented in a high school curriculum, in collaboration with electronics vendor DigiKey.
- Experimented with bare metal programming using an AVR MCU, featuring BLE, UART, ISP, and CAN-FD communication between car and remote.

Object Tracking Web Server **January 2022 – March 2022**
- 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.

Project Space Scanner **September 2021 – December 2022**
- Automated PiB's project space sign-in system using an NFC scanner and Raspberry Pi to monitor member timestamps and potential COVID-19 exposures.
- Recorded student campus ID data to a SQL database to compile attendance analytics and alerts through Google Cloud and Slack API.

SKILLS

- **Programming Languages:** C, C++, R, Python, HTML, CSS, JavaScript, MySQL, PostgreSQL, SystemVerilog, MATLAB.
- **Software Tools/Workflows:** NumPy, scikit-learn, Tensorflow, Matplotlib, Pandas, Jupyter Notebook, Git, Linux, Visual Studio, Aigle, SCRUM
- **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).