

Kendrick Nguyen

San Diego, CA · (858)-952-2267

nguyen.kendrick@yahoo.com · <https://www.linkedin.com/in/kendricknguyen010/> · <https://github.com/kendrick010>

EDUCATION & AFFILIATIONS

University of California, San Diego

September 2024 – Present

M.S. Electrical Engineering

- Research area in Machine Learning & Data Science

University of California, San Diego

September 2020 – June 2024

B.S. Electrical Engineering | Minor in Cognitive Science

- Concentration depth in Computer System Design

Project in a Box (PiB)

December 2020 – June 2024

Engineering Chair, Technical Lead, and Project Space Manager

- Organization established to foster hands-on experience through standalone projects and workshops, impacting +200 students yearly.
- Supervised weekly agile meetings in coordinating outreach/technical workshops and gauging progress across +5 project teams.

WORK EXPERIENCE

Quality Engineer Intern

June 2024 – September 2024

Texas Instruments

- Performed accelerated dielectric breakdown tests on TI high-voltage isolation devices using hipots and thermoregulated saline baths.
- Deployed a company-wide full stack application to optimize procedures and monitor job statuses within the high voltage test laboratory. Centralizing test setups for +20 hipot devices and automating data collection for breakdowns.
- Developed a VISA routine script to handle concurrent asynchronous GPIB hipot commands and to reduce query bottlenecks.

ECE Makerspace Lab Assistant

October 2023 – June 2024

UCSD 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.).
- Developed an equipment sign-in and lock-down system using Flask to orchestrate API requests and webhooks from a third-party member management system and record makerspace member activity.

Technician & Data Analyst

April 2023 – June 2024

UCSD The Basement

- Mentored +12 student startups working in the prototyping lab, providing technical support, workshops, and materials.
- Authored a custom API to streamline data validation and 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 PyTorch and AWS Sagemaker's pipelines to predict root causes for aircraft hardware breakdowns.

ECE Department Tutor

August 2021 – December 2022

UCSD 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.

PROJECTS

Relational Database Application

April 2024 – June 2024

- Created a relational database from scratch in C++ capable of processing and remoting MySQL-like commands, utilizing architectural and design patterns to tokenize, parse, validate, dispatch, and output user-queries.
- Integrated a custom storable interface to adapt various entity objects into storable binary buffers and to abstract block-level input/output operations.
- Modularized database design by implementing indexing and caching using a custom template meta-programming interface to reduce search time.

Manga Colorization

February 2024 – March 2024

- Designed a CycleGANs-based architecture and image-to-image pipeline to automate colorization for manga panels using PyTorch.
- Enhanced training efficiency by implementing a custom gradient scaling module that effectively minimized cycle-consistency loss and optimized training convergence and stability.
- Analyzed style-transfer effects over a scraped dataset of over 8,000 manga panel images from five distinct authors/series.

Mood Mesh

September 2023 – December 2023

- Built an ubiquitous mood enhancing smart light system that dynamically adjusts colors and brightnesses based on JSON-ified biometric data collected from a wearable application using Android Studio.
- Formulated a RESTful architecture between the smart watch's android application, a server application hosted on Raspberry Pi, and the smart lights.

IoT Geo-Logger

August 2022 – May 2023

- Prototyped a geo-logger 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.

SKILLS

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