

FRENDY LIO

✉ frendy@hawaii.edu | 📄 frendylio | 🌐 frendylio | 👤 frendylio.github.io

EXPERIENCE

STAR

Lead SQL Programmer

Jun. 2018 - Present

Honolulu, HI

- Leading the backend team of 7 to maintain and develop STAR Balance, an appointment website for all students and advisors at any 10 campuses of the University of Hawai'i System.
- Discussing solutions and alternatives with clients on new features and current bugs for STAR Balance.
- Programming MS Access interfaces for administrators for the different products of STAR.
- Main tools: React, MS Access, and MS SQL Server.

University of Hawai'i at Mānoa

Software Developer

Aug. 2020 – Present

Honolulu, HI

- Developing Python scripts to control the movement of unmanned aerial vehicles.
- Programming software to detect if an object is near enough to be a hazard for an unmanned aerial vehicle.
- Main tools: ArduPilot, C, DroneKit, MavLINK, and Python.

University of Hawai'i at Mānoa

Teaching Assistant

Jan. 2020 – Dec. 2020

Honolulu, HI

- Organized weekly labs for object-oriented programming in C++ and introduction to programming in C.
- Mentored 26 students in groups and on an individual basis.
- Main tools: Bash, C, C++, and Linux.

Datahouse

Software Engineer Intern

Dec. 2019 – May 2020

Honolulu, HI

- Created a kiosk check-in app for the animal quarantine station for the state of Hawaii that consists of a front-display and queueing system.
- Lead full stack developer of a team of 7 that developed the entire backend, and the skeleton for the frontend design.
- Main tools: Angular, C#, MS SQL Server, and Typescript.

COMPETITIONS

Game The System - HACC 2020

Lead Backend Developer

Oct. 2020 - Nov. 2020

Honolulu, HI

- Runner-up in Hawaii Annual Code Challenge 2020.
- Produced a web application demo that modernized the streamlined process of registering and checking in to ensure the safety of building residents.
- Developed the backend using Laravel, SQL Server, and Amazon Web Services.

CRAM - EduHacks 2020

Project Manager

Aug. 2020 – Oct 2020

Honolulu, HI

- Third place out of 250 teams internationally.
- Organized a team of four to create CRAM, a Credit Asset Management website where students can see their credits and plan their pathway while keeping their privacy via Blockchain.
- Developed with VueJS, DDN Blockchain, and T-SQL.

HECO Rewards - HACC 2019

Lead Hardware Developer

Oct. 2019 - Nov. 2019

Honolulu, HI

- First place in Hawaii Annual Code Challenge 2019.
- Collaborated in a team of eight to create a solution to increase the understanding of the current and future data from EV Charging Stations.
- Built and set up a Raspberry Pi with an Arduino Camera that will read the card's license plates and store them in our database using Python and OpenCV.

Kumu - HACC 2018

Backend Developer

Oct. 2018 - Nov. 2018

Honolulu, HI

- Participated in a team of five that designed and built a two-part system for efficient, user-friendly data reporting and visualization for native Hawaiian plants.
- Developed the backend of the app using PHP and SQL.
- Placed in the top 12 out of 50 in the HACC 2018.

PROJECTS

Covid-19 Detection

- A covid-19 machine learning detection algorithm that uses an FCN model to be able to classify CT-scans of lungs into Covid, Healthy, and Other.
- Obtained an accuracy of 91%.

Facade Semantic Segmentation

- A facade semantic segmentation program that segments a building into five labels, balcony, facade, others, pillar, and window.
- Built using a U-Net and Stacked Hourglass Network.
- Obtained an average precision accuracy of 0.70%.

Huligutta - Reinforcement Learning

- Built an Indian strategy game, Huligutta, to develop a reinforcement learning algorithm.
- Used a minimax algorithm to calculate the best piece movement for a player.

Plant Detection

- Developed an algorithm to detect if an image contains a plant or not.
- Used perceptron, bagging, and, random forest algorithms.

EDUCATION

University of Hawai'i at Mānoa

Master of Science in Electrical Engineering

Aug. 2020 – Present

Honolulu, HI

University of Hawai'i at Mānoa

Bachelor of Science in Computer Engineering

Aug. 2018 – May 2020

Honolulu, HI

Leeward Community College

Associates of Applied Science in Engineering

Aug. 2016 – May 2018

Pearl City, HI

RELEVANT COURSEWORK

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|---------------------------------|--------------------------------------|-------------------------------|
| • Advanced Network Algorithms | • Computer Data Structure | • Machine Learning |
| • Algorithm | • Computational Image Processing | • Negotiation |
| • Circuit Analysis | • Computer Vision | • Object Oriented Programming |
| • Computer Architecture | • Digital System and Computer Design | • Operating Systems |
| • Computer and Network Security | • Intro to Image Processing | • Signal and System Analysis |

TECHNICAL SKILLS

Backend: C#, IIS, MS Access, Rest-API, T-SQL

ML Tools: Keras, TensorFlow

Web Development: Angular, CSS, HTML, JavaScript, React, VueJS

Scripting and System Level: Bash, C, C++, Python

Source Control: Git, GitKraken

ACTIVITIES

Programming and Algorithms Club

Member

Aug. 2018 – Present

University of Hawai'i at Mānoa

- Attending weekly meetings to improve and assist students with their algorithms skills.

IEEE Eta Kappa Nu

Pledge

Aug. 2019 – May 2020

University of Hawai'i at Mānoa

- Successfully inducted as an IEEE Eta Kappa Nu Honor Society Member.
- Tutored weekly freshman and sophomore courses.
- Volunteered in various event associated with IEEE and the College of Engineering at the University of Hawai'i at Mānoa.

Native Hawaiian Science and Engineering Mentorship Program

Member

May 2018 – May 2020

University of Hawai'i at Mānoa

- Volunteered for various STEM event-related to incentivize incoming native Hawaiian students to pursue degrees in STEM.
- Judged for the Hawaii State Olympiad UHM Regional Tournament. Created an engineering exam and hands-on test for middle and high school students.

LANGUAGES

Portuguese: Native or bilingual proficiency

Spanish: Native or bilingual proficiency