
 <https://linkedin.com/in/gramliu>

 <https://github.com/gramliu>

 <https://gramliu.com>

# Gregory "Gram" Liu

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## EDUCATION

### Carnegie Mellon University

Bachelor of Science in Electrical and Computer Engineering (Focus on Software Systems)

Minor in Computer Science

Pittsburgh, PA

May 2023

**GPA: 4.0/4.0**

**Relevant Coursework:** Computer Systems (Assembly/C), Data Structures and Algorithms (C), Introduction to Machine Learning (Python), Software Construction & Design (Java), Database Systems (Go)\*, Functional Programming (SML)\*, Foundations of Software Engineering\*

\* Fall 2021

## SKILLS

### Programming Languages:

JavaScript, TypeScript, Java, Python, C, C++, PHP, SQL

### Hardware:

Arduino, Raspberry Pi, ESP8266

### Software Frameworks:

Node.JS, GraphQL, React.JS, Next.JS, MongoDB, MySQL

Docker, Google Cloud Platform, Android SDK/NDK,

TensorFlow, OpenCV

## EXPERIENCE

### Software Engineering Intern, Dashlabs.ai (YC W21)

May 2021 - Present

- Developed a membership signup platform for client laboratories
  - Built backend in **TypeScript** using **Apollo GraphQL** and **MongoDB**
  - Built frontend in **TypeScript** with **Apollo GraphQL**, **React.JS**, and **Next.JS**

### Research Assistant, CMU Human Computer Interaction Institute

May 2020 - Present

Computer-Human Interaction: Mobility Privacy Security Group

- Created an IoT app development framework that enables reusable native privacy features using **Node.JS** and **React**
- Used **Docker** and **Flask** to implement machine learning and data processing microservices with **TensorFlow** and **OpenCV**
- Built smart applications with **Arduino**, **ESP32/ESP8266**, and **MQTT** including a smart irrigation hub using a MERN stack and indoor triangulation using accelerometers

### Fullstack Engineer, Dashboard Philippines

Mar 2020 – Aug 2020

<https://dashboardphilippines.com/>

- Developed a dashboard to centralize information about hospitals, transportation routes, and relief distribution in the Philippines for the COVID-19 pandemic
- Designed database schema and backend system to track patient/supply capacity of over 2,000 hospitals using **MongoDB**, **Express**, and **React/Redux** in **TypeScript (MERN Stack)**

## SELECTED PROJECTS

### Illuminate Designer

Jan 2021

<https://illuminate.scottylabs.org/>

- Developed a platform for designing lighting sequences on CMU's Randy Pausch Bridge using **React/Redux** with a **Node.JS** backend

### Medisure.ai

Sep 2020

<https://github.com/medisure-ai/medisure-ai>

- Created a platform to summarize medical insurance documents and generate insurance claim denial appeal letters using **OpenAI GPT-3**, **Google Cloud Platform**, **Flask**, and **React**
- Awarded honorable mention for "**Best Use of Google Cloud**" at **PennApps 2020**

## ACTIVITIES AND LEADERSHIP

### Director of Technology, ScottyLabs

2019-Present

- Oversee leadership within committee, coordinating active development of 13 software projects
- Led deployment and development of the website, registration system, judging platform, and participant dashboard for TartanHacks 2021 with over 300 participants from 18 countries (<http://tartanhacks.com/>)

Aug 2020-

Feb 2021

- Developed a REST API and website using **MERN Stack** for looking up course information and estimated workload per week for CMU courses (<http://course.scottylabs.org/>) with **700** users

Mar 2020-

May 2020

## HONORS

CMU College of Engineering Dean's List

2019-2021

8<sup>th</sup> Place, National Olympiad for Informatics, Philippines

2019