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

○ https://github.com/gramliu

⊕ https://gramliu.com

GRAM LIU

gramliu@cmu.edu

EDUCATION

Carnegie Mellon University　　　　　　　　　　　　　　　　　　　　Pittsburgh, PA
Bachelor of Science in Electrical and Computer Engineering, **GPA: 4.0 / 4.0**　　　May 2023
Programming Coursework: Computer Systems (Assembly/C), Data Structures and Algorithms (C)
EE Coursework: Structure and Design of Digital Systems, Electronic Devices and Analog Circuits

SKILLS

Programming Languages:
　(*proficient*): JavaScript, TypeScript, Java, Python, C, C++
　(*familiar*): PHP, SQL, Bash
Hardware:
　Arduino, Raspberry Pi, NodeMCU

Software Frameworks:
Node.JS, Express, React, Redux, Slim, MongoDB, MySQL, Firebase, Android SDK/NDK, Git, Linux, Nginx, TensorFlow, OpenCV, Node-RED

EXPERIENCE

Research Assistant, CMU Human Computer Interaction Institute　　　　May 2020 - Present
Computer-Human Interaction: Mobility Privacy Security Group

- Developed an IoT network hub that integrates sensors across LAN into scalable and secure smart systems
- Used **Node-RED** and **Node.JS** to develop a modular interface with functional programming principles
- Used **OpenCV**, **TensorFlow**, and **FFMPEG** to filter or transform outgoing private information collected by microphones and cameras for anonymity

Fullstack Engineer (volunteer), Dashboard Philippines (nonprofit)　　　Mar 2020 - Present
https://dashboardphilippines.com/ | https://donations.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 with more than 10,000 distinct hierarchical documents using **MongoDB, Express, React/Redux,** and **Node.JS (TypeScript) (MERN Stack)**

SELECTED PROJECTS

Distributed Air Quality Monitoring System　　　　　　　　　　　　　　　Mar 2019
https://github.com/ph-innovation-network/amihan

- Designed and created modular air quality monitoring circuit board using **Arduino** and **NodeMCU** (ESP8266). Created server backend for collecting and visualizing information using **PHP (slim), React,** and **MySQL**

Medisure.ai　　　　　　　　　　　　　　　　　　　　　　　　　　　　　Sep 2020
https://github.com/gramliu/medisure-ai

- Developed a platform to summarize medical insurance SBC documents and automatically 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

- Lead weekly meetings with over 30 active members, developing and maintaining over 10 different software projects and APIs for the CMU community
- Developed a **RESTful API** for course information and estimated workload per week for different courses using **MERN Stack**
- Developing new registration system for TartanHacks, CMU's largest hackathon, using **MERN Stack**

Events Coordinator, Society of Asian Scientists and Engineers　　　　　　2019-Present

- Organize professional and cultural events for 15 active members

HONORS

　CMU College of Engineering Dean's List　　　　　　　　　　　　　　　　2019-2020
　8th Place, National Olympiad for Informatics, Philippines　　　　　　　　　　2019
　5th Place, National Physics Olympiad, Philippines　　　　　　　　　　　　　2018