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# GRAM LIU

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## Education

### CARNEGIE MELLON UNIVERSITY (CMU)

BS in Electrical and Computer Engineering
Minor in Software Engineering
May 2023  |  Pittsburgh, PA
GPA: 4.0 / 4.0

## Coursework

- Computer Systems (C / Assembly)
- Data Structures and Algorithms (C)
- Fundamentals of Computer Science (Python)
- Introduction to Electrical and Computer Engineering

## Skills

**Languages**
Java • Python • C • C++
Javascript • Typescript
PHP • SQL • Bash

**Frameworks**
NodeJS • Express • ReactJS • Slim
MongoDB • MySQL • Firebase
Android SDK/NDK • Flutter
Git • Linux • Nginx
TensorFlow • OpenCV • Node-RED

**Hardware**
Arduino • Raspberry PI • NodeMCU

## Publications

Development of a Mobile Android Application on Optical Character, Speech, and Sign Language Recognition
    published in the proceedings of the 2018 Physics Society of Visayas and Mindanao National Conference (Philippines)

## Honors

2019   CMU Engineering Dean's List
2019   8th place at National Olympiad for Informatics (Philippines)
2018   5th place at National Olympiad for Physics (Philippines)

## Experience

### CMU Human Computer Interaction Institute
**Computer Human Interaction: Mobility Privacy Security Group**
Research Assistant
May 2020 - Present  |  Pittsburgh, PA

- Developed an IoT network hub that transforms normal sensors across LAN into a smart home system with a focus on privacy using **Node-RED**, **Node.JS**, **OpenCV**, and **TensorFlow**

### Dashboard Philippines
March 2020 - Present  |  Philippines
https://dashboardphilippines.com/
https://donations.dashboardphilippines.com/

- Partnered with the Philippine government to develop a national dashboard centralizing information and relief distribution in the Philippines during COVID-19 pandemic
- Created platform streamlining donation process to hospitals to address the deficiency of medical supplies using **MongoDB**, **Express**, **React**, and **Node.JS (Typescript)**

## Selected Projects

### National Air Quality Monitoring System
March 2019 - Present  |  Philippines
https://github.com/ph-innovation-network/amihan

- Designed and created modular air quality monitoring device using **Arduino** and **NodeMCU**
- Created backend for collecting this information using **PHP (slim)** and **MySQL**

### Public Transport Tracking App
December 2018  |  Philippines
https://github.com/gramliu/Suroy

- Developed **Android** app showing locations of public transportation vehicles in the Philippines with **Firebase** and **Google Maps** integration
- Awarded in multiple national competitions in the Philippines

## Activities and Leadership

### ScottyLabs  |  Director of Technology
August 2019 - Present  |  Pittsburgh, PA

- Led the Tech Committee with 25 members, working on various projects and APIs for the CMU community
- Developed Course API which gives access to course information using **MongoDB**, **Express**, **React**, and **Node.JS (MERN) Stack**
- Developing registration system for TartanHacks (CMU's largest Hackathon) using **MERN Stack**

### Society of Asian Scientists and Engineers
Events Coordinator
August 2019 - Present  |  Pittsburgh, PA

- Organized professional and cultural events for club with 10-15 active members to enrich student experience and pride in Asian heritage