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

- 18-213: Computer Systems (C)
- 15-122: Imperative Computation (C)
- 15-112: Fundamentals of Computer Science (Python)
- 18-100: Introduction to Electrical and Computer Engineering

Skills

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

Frameworks
Git • Linux • Nginx
Android SDK/NDK • Flutter
NodeJS • Express • ReactJS • Slim
MongoDB • MySQL • Firebase
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 Dean's List (Fall 2019)
2019   8th place at National Olympiad for Informatics (Philippines)
2018   5th place at National Olympiad for Physics (Philippines)

Work Experience

CMU Human Computer Interaction Institute
Computer Human Interaction: Mobility Privacy Security Group
Summer Undergraduate Research Assistant
May 2020 - Present | Pittsburgh, PA
https://privacystreams.github.io/
- Developed IoT network hub that filters extraneous outgoing sensor data using **Node-Red** and **Node.JS**

Selected Projects

Dashboard Philippines
March 2020 - Present | Philippines
https://dashboardphilippines.com/
https://donations.dashboardphilippines.com/
- Partnered officially 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)**

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://gitlab.com/GramLiu/suroy
- Developed **Android** app that shows locations of public transportation vehicles in the Philippines with **Firebase** and **Google Maps** integration
- Awarded 1st Place, Arduino Day (2019); 2nd Place, Hack4PH (2018)

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 use on CMU
- Developed Course API which gives access to course information using **MongoDB, Express, React,** and **Node.JS**
- Managed **Ubuntu Linux** server maintenance and API proxy forwarding between two servers using **Nginx**

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