GRAM LIU

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https://github.com/gramliu

EDUCATION

Carnegie Mellon University   Pittsburgh, PA
Bachelor of Science in Electrical and Computer Engineering, GPA: 4.0   May 2023
Relevant Coursework: Fundamentals of Programming and Computer Science, Introduction to
Electrical and Computer Engineering, Principles of Imperative Computing*, Fundamentals of
Mechanical Engineering*
* - in progress

SKILLS

Software: Java, Python, C++, Android SDK/NDK, Flutter, PHP, MySQL, Node.JS, Bootstrap, JQuery, Git,
          OpenCV, TensorFlow, Google Firebase, Google Maps API, SolidWorks
Hardware: Arduino, Raspberry Pi, NodeMCU

PROJECTS

National Air Quality Monitoring System (Philippines)   2019-Present
- Designed and created modular air quality monitoring device with 20 other team members
- **Role:** Backend and Full-stack Developer
- **Technologies used:** PHP (slim), MySQL, Arduino, NodeMCU, Flutter

Public Transportation Tracking App (Philippines)   2018-2019
- Developed public transportation Android app with integrated RFID payment system
- Received awards: **1st place,** Arduino Day (2019); **2nd Place,** Hack4PH (2018)
- **Role:** Lead developer in team of four
- **Technologies used:** Arduino, Android SDK, Google Firebase, Google Maps API

Sensory and Learning Disability Aid (Philippines)   2018
- Developed Android app for sign language, speech, and optical character recognition
- Received awards: **Silver Medal**, International Invention and Innovation Competition in
  Canada (iCAN); **Bronze Medal**, Asian Youth Innovation Awards; **Champion**, iGEN: Ideas to
  Innovation
- **Role:** Solo Developer
- **Technologies used:** Android SDK/NDK, TensorFlow Lite, OpenCV Android

GripAid (Philippines)   2019
- Created grip exoskeleton to provide additional grip strength for those with degenerating
  physical conditions such as arthritis
- **Role:** Developer
Technologies used: Arduino

PUBLICATIONS

Development of a Mobile Android Application on Optical Character, Speech, and Sign   2018
Language Recognition
- Co-authored and published a paper in the proceedings of the 2018 SPVM
  National Conference

ACTIVITIES AND LEADERSHIP

ScottyLabs Tech Committee (CMU)   2019-Present
- Organized TartanHacks, the largest hackathon in CMU
- Contributed to PrintAPI, allowing mobile and web printing to CMU printers
- Developing API for access to CMU course information and FCE data
- Developing API to control lights on the Randy Pausch Bridge of CMU

Society of Asian Scientists and Engineers (SASE) (CMU)   2019-Present
- Freshman Representative
- Events Coordinator

Developh Innovation Team (Philippines)   2019-2020
- Encouraged youth-led innovation for social impact across the developing world
- Organized an accelerator for social good tech startups in the Philippines

HONORS

International Olympiad in Informatics 2019 (top 8 nationwide), Philippines   2019
International Physics Olympiad 2018 (top 5 nationwide), Philippines   2018