

Andy Kong

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Education

Carnegie Mellon University - Pittsburgh, PA

B.S. Computer Science, GPA: 3.6

August 2018 – May 2022

Hoover High School - Hoover, AL

GPA: 4.5

August 2014 – May 2018

Work Experience

MIT Lincoln Laboratory — Bioengineering Research Intern

May - August 2019

- Co-instructed Medlytics course at Beaver Works Summer Institute, teaching high schoolers the statistical bases of supervised and unsupervised ML
- Helped implement models for genomic disease prediction, population health diagnosis, and biological signal processing
- Processed voice, wearable EKG, and reaction time data to predict fatigue.

Projects

Pulse Oximeter

August-September 2019

- Built low-noise amplifier circuit for measuring heartrate using just an LED, photodiode, and op-amp.
- Achieved 20mV noise after 1000x gain from negative feedback using off-the-shelf components, with improvements using better parts.
- Incorporated circuit into a wearable package for continuous monitoring of the Mayer wave.

Mobots Judge's Choice Award - Rollyboi V2 Arduino

April 2019

- Built an autonomous, self-rolling wheel robot using limited-angle servomotors to navigate a racetrack as quickly as possible.
- Completed two sprints in two weeks, going from raw materials to complete, functional prototypes.
- Coded PID control into an Arduino for autonomous driving and turning.

Wireless Quiz Bowl Lockout Buzzer System C/C++, Arduino

May-July 2017

- Prototyped portable, Jeopardy-style buzzer system for high school quiz bowl team.
- Bundled Arduino Nanos into wireless, battery-powered handhelds that sent unique ID codes to a central receiver without collision.
- Modified open source RadioHead communication library for the nRF24L01 chip to allow more open radio channels at once.

Activities and Achievements

Editor-In-Chief of Food for Thought

critiquefood.blogspot.com

Head writer of an analytic food diary and travel blog preserved by Memory of Mankind August 2016 - now

Hoover Robotics Team Organizer

August 2015 - May 2017

Founded the first robotics organization in school district, with 50+ total members