ANGEL HUANG

(626) 200-9784 | huangel@mit.edu | https://huangel.github.io

EDUCATION

Massachusetts Institute of Technology, GPA 4.6/5.0, 2021 — Cambridge, MA

Candidate in Electrical Engineering and Computer Science, Minor in Biomedical Engineering

Relevant courses: Introduction to Algorithm, Fundamentals of Programming, Probability and Random Variables

Taipei American School, High School Diploma, GPA 3.95/4.0, 2017 — Taipei, Taiwan

WORK EXPERIENCE

Massachusetts General Hospital Martinos Center for Biomedical Imaging — **Cambridge, MA**

Undergraduate Researcher — September 2018 - Present

- Built machine learning algorithm in Matlab to analyze whether apparent resting-state networks stem from vascular response
- Developed algorithm to remove MRI data noise as well as analyze peaks, areas, and full-peak at half-maximum (FWHM)

Via Technologies: the biggest independent manufacturer of motherboards in the world — **Taipei, Taiwan**

Software Engineering Intern — June 2018-August 2018

- Developed trigger word detection algorithm (i.e. "Okay, Google") Keras and Tensorflow frameworks to improve speech processing pipeline and analysis
- Implemented speech gender-detection algorithm using Gaussian Mixture Models and improved accuracy from 50% to 97%
- Constructed algorithm to change LED light colors on microcontroller based on the audio signal frequency in C++
- Introduced machine learning into Via's educational curriculum in China and the related hardware- and software- products

Massachusetts Institute of Technology Media Lab — **Cambridge, MA**

Undergraduate Researcher — January2018-June 2018

- Investigated ways to apply Blockchain to improve the electronic medical record system in the U.S.
- Prototyped Blockchain simulation that enables researchers to identify the program's efficiency and security in real time

Massachusetts Institute of Technology Langer Lab — **Cambridge, MA**

Undergraduate Researcher — September 2017-June 2018

- Optimized the delivery of CRISPR/Cas9 into in-vivo system by perfecting process of nanoparticle formulation
- Formulated CRISPR/Cas9 nanoparticles for other labs to perform different experiments

Nazarbayev Intellectual Schools — **Karaganda, Kazakhstan**

Biology Teacher and Curriculum Advisor — December 2017 – January 2018

- Led laboratory design workshops to encourage 10th grade students to take control of their own learning process
- Taught local Kazakhstan teachers to promote active and hands-on learning to prepare students for future education and career

Fu Jen University/National Taiwan University — **New Taipei City, Taiwan**

Research Assistant and Physician Assistant — June 2015-August 2017

- Collected/analyzed data to present the failure of current chemotherapeutic strategy for breast cancer and identified specific biomarkers to help improve chemotherapy
- Analyzed the cause of diverse range of symptoms among Enterovirus71 infections and identified 4 mutations that causes brain death instead of being asymptotic

LEADERSHIP

FIRST Robotics Competition: *Team Captain | Consultant* — December 2014-Present

- Increased analysis efficiency by 110% and decreased human mathematical errors by developing an auto-analysis program
- Introduced FIRST to the Taiwanese public/government to increase Taiwanese students participation at global competitions
- Co-hosted the first FRC regional in Taiwan in 2018 by emceeing and giving the government feedbacks about operations

MIT Hacking Medicine: *Operations Lead* — September 2017-Present

- Organized the logistical needs for the 2018 April Grand Hack that attracted more than 500+ hackers
- Consulted for other organizations to help hold their own healthcare hackathons

Lean On Me: *Director of MIT Chapter* — September 2017-Present

- Automated application process of new chapters in universities across the U.S. to increase the efficiency of expansion
- Served as Mental Health Student Advisor to create a stress relief space with administrator

HONORS AND AWARDS

- **2017** Intel International Science & Engineering Fair 4th Award
- **2017** Certification in ACLS, NRP, ETTC, and EMT-1
- **2016** Infectious Disease Society of Taiwan 1st Place poster
- **2016** FIRST Dean's List Finalist
- **2016** MIT Network of Educators in Science and Technology
- **2015** National Honor Society and Spanish Honor Society

ADDITIONAL SKILLS AND INTERESTS

- Fluent in Mandarin and English (First Language) • Proficient in Spanish (5 years) • Hike/explore • Tennis • Cooking
- Technical Skills: Python, Matlab, HTML/Css/Javascript, C/C++, Machine Learning, Arduino, Java