ANGEL HUANG

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EDUCATION

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

- B.S. & M.Eng. in Electrical Engineering and Computer Science — Expected '21
- **Relevant courses:** Elements of Software Construction, Signals and Systems, Introduction to Algorithm, Fundamentals of Programming, Probability and Random Variables, Linear Algebra, Differential Equations

WORK EXPERIENCE

MIT Computer Science & Artificial Intelligence Laboratory Computer Aided Programming Group — **Cambridge, MA**
Undergraduate Researcher — Feb. '18 – Present

- Constructed a Version Space Algebra synthesizer that takes a set of input and output and returns the program transformation
- Created a smart renaming tool that identifies the correct concepts and variables through program synthesis and casual inference

International Business Machines (IBM) Research — **Cambridge, MA**
Software Engineering Intern — Jan. '18 – Feb. '18

- Constructed a knowledge graph to help visualize interactions occurring in patients with multiple morbidities and treatments
- Utilized the graph to predict possible drug-to-drug interactions and visualize their respective pathways using machine learning

Massachusetts General Hospital Martinos Center for Biomedical Imaging — **Cambridge, MA**
Undergraduate Researcher — Sept. '18 - 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 — Jun. '18 - Aug. '18

- 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 — Jan. '18 - Jun. '18

- 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

Nazarbayev Intellectual Schools — **Karaganda, Kazakhstan**
Biology Teacher and Curriculum Advisor — Dec. '17 - Jan. '18

- 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 — Jun. '15 - Aug. '17

- 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* — Dec. '14 - 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* — Sept. '17 - 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

MIT Consulting Group: *Consultant* — Jan '18 - Present

- Analyzed the market for API/services market of college communities and industry for Nasdaq's future product
- Deliberated the final presentation in front of Nadaq's program manager, recruiter, and CTO

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