Jessica Sun

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EDUCATION

Massachusetts Institute of Technology Expected 2021
B.S. in Computer Science and Molecular Biology, HackMIT Co-Director
Relevant coursework: Introduction to Algorithms, Interconnected Embedded Systems, Fundamentals of Programming, Introduction to Probability, Math for Computer Science

EXPERIENCE

Computational Engineering Intern, Moderna Summer 2019

- Implemented an MHC-binding neural network to predict immunogenicity, improving run time by 400x
- Prediction model used in major drug pipelines to prevent adverse immune responses
- Developed a web app to analyze binding predictions between input sequences and MHC receptors
- Built interactive visualizations using Altair to identify mutations producing off-target effects

HR Technology Intern, Mastercard Summer 2018

- Developed a chatbot to answer HR policy questions, significantly reducing HR ticket workload
- Bot collects user experience feedback and returns personal data from Workday database
- Automated case assignment for the HR Systems team
- Integrated Mastercard acquisition company data in Workday

Research Assistant, Pathology and Immunology, Washington University School of Medicine 2016-2017

- Developed and characterized a novel zinc-finger construct for targeted epigenetic modification
- Semifinalist, Siemens Competition in Math, Science, and Technology 2016, top 300 in the nation
- Finalist, Intel International Science and Engineering Fair 2017

Research Assistant, Optical Radiology Lab, Washington University School of Medicine 2014-2015

- Developed a novel spatial frequency domain method for fluorescence imaging in tumor detection
- Automated imaging system with MATLAB and analyzed tumor images with ImageJ
- Co-first author on "Enhancing in vivo tumor boundary delineation with structured illumination fluorescence molecular imaging and spatial gradient mapping" paper published in the Journal of Biomedical Optics (see J Biomed Opt. 2016 Aug; 21(8): 080502)
- Finalist, Intel International Science and Engineering Fair 2015

EXTRACURRICULARS

Co-Director, HackMIT

- Organize and run MIT's largest undergraduate hackathon with 1000 students
- Manage team of 30, lead team meetings, set timeline and shape organizational strategy
- Generate yearly revenue of $XXXK, recruit sponsors and speakers, and facilitate admissions and outreach

Fellow, Pear VC

- Research specific investment areas, source startups on campus, and advise Pear Dorm companies
- Coordinate community entrepreneurship events and share insights at investment meetings

Undergraduate Researcher, MIT Media Lab, Community Biotechnology

- Designing a platform for community biology labs to collaborate on research projects and share resources
- Connecting researchers through tools such as peer-to-peer review and a global lab repository

SKILLS

Python, C++, HTML/CSS, JavaScript, SQL, Git, Docker, MATLAB, ImageJ, Microsoft Excel, Workday