Victoria **Liu**

Pasadena, CA vliu@caltech.edu (732) 299-7606 U.S. Citizen

EDUCATION

CALTECH

GPA 4.0 | Expected Grad: 2022
B.S. in Biology + Computer Science

COURSEWORK

UNDERGRADUATE

Algorithms
Decidability and Tractability
Data Structures
Computing Systems
Discrete Mathematics
Learning Systems
Deep Learning

AWARDS

RESEARCH

- 2021 Marcella Bonsall SURF Fellow
- 2020 J. Kent Clark SURF Fellow

ACADEMICS

- 2021 + 2020 McClure Communications Prize
- American Invitational Mathematics Exam (AIME) Qualifier
- National Merit Scholarship Semifinalist

STUDENT LIFE

- Health Advocate (EMR + NIMS certified)
- 2021 Housner Discovery Fund recipient

SKILLS

- Python • Java • C/C++ • Git •
- R • MATLAB • Mathematica •
- SQL • SciPy • NumPy • pandas •
- PyTorch • TensorFlow • sklearn •

LINKS

☐ linkedin.com/in/vliu8/
☐ github.com/liuvictoria

EXPERIENCE

THE JACKSON LABORATORY | DATA SCIENCE INTERN

☐ Fall 2021 – Present ☐ Remote

- Developing a single cell sequencing Python pipeline to detect novel inhibitory receptors in tumor infiltrating immune cells
- Discovering novel immunotherapy drug targets for personalized medicine

STANFORD UNIVERSITY | MACHINE LEARNING INTERN

☐ December 2020 – Present ☐ Stanford, CA

- Conceptualized and implemented multi-task learning deep neural networks for MR image reconstruction using PyTorch
- Created 5+ architectures with better metrics than single-task baseline
- Contributed to open source and actively managed all stages of SDLC
- Presented findings to 80+ members of Stanford's Radiology Department
- Paper to be submitted to NeurIPS, MICCAI, + IEEE

CALTECH | DATA SCIENCE INTERN

☐ January 2017 – June 2018 ☐ Pasadena, CA

- Created dashboards for melanoma's drug resistance pathways
- Automated bulk transcriptomic annotation process (4 hours per file to seconds)
- Uncovered similar drug resistance pathways in other cancers

RUTGERS UNIVERSITY | NJ GOVERNOR'S SCHOOL

☐ Summer 2015 ☐ New Brunswick, NJ

- Developed a hand-held speech-to-speech translator using Python and CAD
- Presented the device to Lockheed Martin representatives

PUBLICATIONS

PHENOTYPIC HETEROGENEITY AND EVOLUTION OF MELANOMA CELLS ASSOCIATED WITH TARGETED THERAPY RESISTANCE. (CO-AUTHOR) PLoS computational biology 15, no. 6 (2019): e1007034. (DOI: 10.1371/journal.pcbi.1007034.g001)

KINETIC INFERENCE RESOLVES EPIGENETIC MECHANISM OF DRUG RESISTANCE IN MELANOMA. (CO-AUTHOR W/ NOBEL LAUREATE DAVID BALTIMORE) (DOI: 10.1101/724740).

PERSONAL STATEMENT

I am a software developer with 6+ years of coding and 2+ years of deep learning experience. I am seeking a new grad SDE position where I can work with my team to deliver efficient code and drive the company forward. I am customer-obsessed and bring a growth mindset to the table.