YINGJIE (TIM) LING

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EDUCATION

Tufts University **Medford, MA**
B.S. Computer Science & B.S. Biology Expected Graduation: May 2021

- GPA: 3.95/4.0 | Dean's List All Semesters
- Laidlaw Scholar 2019-2021 Cohort

EXPERIENCE

Lin's Lab **Medford, MA**
Undergraduate Researcher September 2018 – present

- Working with chemists to develop computational tools for inhibitor design and protein-protein interaction studies. I independently designed and improved many user-friendly programs and protocols for data analysis and visualization.

Mass. Eye & Ear **Boston, MA**
Volunteer June 2018 – Present

- Answering questions from patients at the front desk; transporting patients between the clinics; making new beds in the surgical unit; and preparing charts for surgeries.

Teaching at Tufts **Medford, MA**
Undergraduate Teaching Assistant September 2018 – Present

- TAed General Chemistry (F2018, S2019), General Physics (F2019) and Bioinformatics (F2019). I will TA Computation Theory in F2020.

PAST PROJECTS

Computational Alanine Scan Package [GitHub Link] May – June 2020

- Implemented a computational Alanie scan protocol for protein structural analysis. The program identifies the interface residues between different protein chains and calculates the binding energies.
- The program is written in Python and uses NumPy, Matplotlib, and PyRosetta.

Dihedral Principal Component Analysis Package [GitHub Link] April – May 2020

- Implemented a density peak based principal component analysis algorithm for molecular dynamics (MD) simulation. The program separates MD trajectories into different clusters.
- The program is written in Python and uses NumPy, scikit-learn, Matplotlib, and MDAnalysis.

"Rube" Programming Language Interpreter November – December 2019

- Wrote an interpreter for a programming language called "Rube", a small object-oriented programming language with a syntax similar to Ruby. A static type checking system is also implemented for this interpreter. This is the final project for the Programming Languages class.
- The interpreter is written in Standard ML.

SKILLS AND STRENGTHS

Programming Languages - C/C++ (Advanced), Python (Advanced), Ruby (Past Experience)
Analytical Packages - scikit-learn, NumPy, pandas, NetworkX, MATLAB, R
Languages - Chinese, English