Jingyi Liu (909) 223-5069 | jl1606@princeton.edu

EDUCATION

Princeton University, Princeton, NJ 08/2022-Current
- Ph.D. student in Theoretical Computer Science
- Advised by Mark Braverman and Matt Weinberg
- Selected Courses taken: Advanced Algorithm Design, Theoretical Machine Learning, Mechanism Design and Cryptocurrency Seminar, Advanced Computational Complexity

Harvey Mudd College, Claremont, CA 08/2017-05/2022
- GPA: 3.97
- Bachelor of Science in Joint Computer Science and Mathematics
- Graduated with High Distinction and Departmental Honors in Mathematics

SKILLS

Computer Language: Proficient in Python, Java; Experience with C++, C
Software: Proficient in LaTeX, Visual Studio Code, Android Studio; Experience with Mathematica
Language: Bilingual in Chinese and English

Research Experience

Researcher, Princeton University, Princeton, NJ 09/2022-Present
- Analyzed the strategic behavior of mining agents on blockchains with Byzantine consensus
- Analyzed matching markets without money and the hardness of equilibrium computation

Researcher, Harvey Mudd College, Claremont, CA 05/2022-08/2022
- Developed algorithms for creating a distance profile of RNA foldings from classic Zuker's algorithm
- Published a paper "Distance Profiles of Optimal RNA Foldings" in *ISBRA 2022.*

Researcher, Polymath Jr. Program, Online 06/2021-08/2021
- Polymath Jr. is a collaborative mathematical research program for undergraduate students
- Worked on the expanding polynomials project under the supervision of Adam Sheffer from The City University of New York (CUNY)
- Developed proofs for the number of distinct distances between two sets of points located on two conic curves in three-dimensional space and submitted a paper "Distinct Distances in R^3 between Quadratic and Orthogonal Curves"

Researcher, Harvey Mudd College, Claremont, CA 05/2020-08/2020
- Studied inference methods for evolutionary events under Duplication-Transfer-Loss Model (DTL)
- Developed optimization algorithms for an extension of DTL model that incorporates synteny information of extant genes and accounts for non-binary gene trees
- Published a paper "Maximum Parsimony Reconciliation in the DTLOR model" in *BMC Bioinformatics*

Work Experience

MININGLAMP Technology Software Engineer Intern, Beijing, China 09/2020-12/2020
- Created a microservice to manage the services the company provides to its clients to access specific data and created APIs that verify if such a service is valid before fetching the corresponding data
- Created a microservice for the company to license its software products and store the information in a database and terminate a software service when the license expires
- Wrote programs to capture workers' welding process on the construction site through IoT cameras and send that data to the computer vision team to evaluate whether the workers' job was properly performed

Facebook Software Engineer Intern, Menlo Park, CA 06/2019-08/2019

- Worked on Android development in a product team and customized content creation page
- Implemented paginated data fetching using GraphQL and refactored a surface view