URO LYI

urolyi1@gmail.com urolyi1.github.io

EDUCATION AND COURSEWORK

University of Maryland, College Park, Class of 2022, ACES Honors College LLP, Math and Computer Science Double Major **GPA: 4.0**

MATH340 Honors *Multi-variable Calculus and Linear Algebra*; MATH341 Honors *Differential Equations and Linear Algebra*; MATH410 *Advanced Calculus*; CMSC132 *Object Oriented Programming II*; CMSC216 *Introduction to Computer Systems*; CMSC351 *Algorithms*

Montgomery Blair High School Science and Math Magnet (2014-2018) **GPA: 4.81**

COMPUTER SKILLS

Java, Python, C, R, Javascript, MATLAB, LATEX, Excel

EXPERIENCE

Undergraduate Research at University of Maryland, College Park

Fall 2019-Present Professor: Dr. John Dickerson

- Designing a neural network structure to learn an optimal matching mechanism with properties like dominant-strategy incentive compatibility and individual rationality.
- Implementing the network in TensorFlow and use it to recover known optimal mechanisms and eventually extend out to unknown cases.

Millennium Management Group LLC: Quantitative Research Intern

Summer 2019 Portfolio Manager: Jan-Hein Cremers

- Developed python module to handle daily option data from global securities and compute VIX-like index from prices.
- Researched variance swap pricing theory, the VIX, and volatility forecasting measures. Used this knowledge to developed proprietary trading strategies using research and analysis of option data in global markets.

Research Assistant at University of Maryland, College Park

Summer 2018 Professor: Dr. Michael Fu, College Park, MD

- Created a website where users can play against a Monte-Carlo Tree Search (MCTS) AI with customizable settings for demonstration at a conference workshop.
- Coded homework solutions in python for a graduate-level simulation optimization course.

Research Internship at University of Maryland, College Park

Summer 2017 Mentor: Dr. Michael Fu, College Park, MD

- Created an option pricing model that incorporated stochastic volatility and jumps. Recovered an analytical solution using Fast Fourier Transform characteristic funciton inversion. Used analytical solution to test the effectiveness of three control variates.
- Wrote a research paper that was named in the Regeneron (formerly Intel) Science Talent Search Top 300 and published in Proceedings of Winter Simulation Conference 2018 and presented at the Winter Simulation Conference in Gothenburg, Sweden.

PEER-REVIEWED PUBLICATIONS

Uro Lyi, and Michael Fu,"Option Pricing with Stochastic Volatility and Jumps Using the Fast Fourier Transform", *Proceedings of the Winter Simulation Conference*, 2018

ACTIVITIES, CLUBS AND AWARDS

Co-President of Smith Investment Fund (SIF): *2018-Present*, Co-president of the quantitative investment team that develops, backtests and executes systematic trading strategies.

Banneker-Key Scholarship: Recipient of UMD's most prestigious merit scholarship