Katherine Xiong

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Education

Massachusetts Institute of Technology   Class of 2022
Candidate for B.S. in Computer Science, GPA: 5.0/5.0
Relevant Coursework: Design and Analysis of Algorithms, Introduction to Machine Learning, Computation Structures, Fundamentals of Programming, Real Analysis

Experience

Philips   **Eindhoven, The Netherlands**
Research Intern   June – August 2019
- Trained neural networks using Keras and Tensorflow to predict respiratory-related hospitalizations based on air pollution concentrations and search volume data from Google Trends
- Helped lobby data provider for more spatially varied hospitalization data by showing effects of traffic density on pollution levels

MIT Urban Mobility Lab   **Cambridge, MA**
Research Assistant   September 2019 – Present
- Developed time-series forecasting models in Python for short term travel demand of public transit in Hong Kong

UNT Computational Epidemiology and Response Analysis Lab   **Denton, TX**
Research Assistant   October 2016 – April 2018
- Improved and combined two individual disease models into a comprehensive, dynamic model in Java to simulate the spread of viral, vector borne diseases
- Co-authored a journal article titled "Modeling the 2013 Zika Outbreak in French Polynesia: Intervention Strategies"

Jane Street Women in STEM   **New York City, NY**
Participant   July 29 – 31, 2018
- One of 80 students selected to visit Jane Street headquarters to learn about quantitative trading and stock markets, participate in mock trading, and network with Jane Street employees

Projects

Interactive Map   March 2019 – June 2019
- Developed a website for the Boston Children's Museum hosting an interactive map with pop-up descriptions for each exhibit

ReCon   September 2019
- Built a website at HackMIT that scans receipts using the Microsoft Azure Computer Vision API and visualizes spending habits

Leadership

MIT Global Teaching Lab   **Sao Paulo, Brazil**
Teacher   January 2019
- Implemented workshops involving laser cutting, 3-D printing, Arduino, and MIT App Inventor in a makerspace for 60 children
- Designed and taught a three-day Introduction to Python class to 15 students age 12-18

Mu Alpha Theta   **Denton, TX**
President   2014 – 2018
- Organized weekly general assemblies, pioneered competition math classes for members to prepare for local and national math competitions, and implemented other new initiatives (e.g. diverse competitions, more outreach)
- Grew the club from 15 to over 40 active members

Awards

USA Computing Olympiad Gold Division	2017
American Invitational Mathematics Exam Qualifier	2015, 2017, 2018
Siemens Competition Semifinalist	2017
Girl Scout Gold Award	2018

Skills & Interests

Software: Java, Python, HTML, CSS, JavaScript, Keras, Tensorflow
Languages: English - fluent, Chinese – fluent
Interests: dance, origami, photography, playing Tractor