

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, Computation Structures, Introduction to Machine Learning, Fundamentals of Programming, Real Analysis

Texas Academy of Math and Science

Class of 2018

GPA: 4.0/4.0, Honor's Diploma

Experience

Philips

Eindhoven, The Netherlands

Research Intern

June 2019 – Present

- Trained neural networks to predict respiratory-related hospitalizations based on air pollution concentrations
- Analyzed Google Trends data to find correlations between air pollution and symptoms of asthma and chronic obstructive pulmonary disease

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"

6.009 Fundamentals of Programming

Cambridge, MA

Lab Assistant

February 2019 – Present

- Helped run office hours for a class of over 500 students; taught students how to write clean and efficient algorithms in Python

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

- Built a website for the Boston Children's Museum hosting an interactive map with pop-up descriptions for each exhibit

Leadership

MIT Global Teaching Lab

Sao Paulo, Brazil

Teacher

January 2019

- Implemented workshops involving laser cutting, 3-D printing, Arduino, Scratch, and MIT App Inventor in a makerspace for 60 children age 5-15
- 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 and Honors

American Invitational Mathematics Exam Qualifier

2015, 2017, 2018

Siemens Competition Semifinalist

2017

USA Computing Olympiad Gold Division

2017

Girl Scout Gold Award

2018

Skills

Software: Java, Python, HTML, CSS, JavaScript

Languages: English - fluent, Chinese - fluent, French – intermediate