Kate Xu

katexu@mit.edu | 484-988-3009 | k8xu.github.io | github.com/k8xu | linkedin.com/in/kateyxu

EDUCATION

Massachusetts Institute of Technology (MIT)   May 2022

B.S. in Computer Science, Economics, and Data Science and Mathematics, GPA: 4.7/5.0

Relevant Coursework: Machine Learning, Algorithms and Data Structures, Linear Algebra, AP Statistics, Probability and Random Variables, Discrete Math for CS, Multivariable Calculus, Microeconomics

WORK EXPERIENCE & PROJECTS

Data Science Intern | Bancolombia   June 2019 - August 2019

Project: Credit Risk Modeling with Low Default Portfolios (code on GitHub)

- Researched state-of-the-art methods for predicting risk on imbalanced data with systematic search
- Implemented and improved XGBoost, decision trees, and ensemble classification models in Python
- Presented model performance on German credit dataset to boss, supervisor, and other data scientists

Course Assistant | MIT Intro to Programming and Data Science Class   February 2019 - May 2019

- Debugged, graded, and wrote solutions to problem sets in Python for a 350+ student class
- Evaluated student understanding on coursework and mentored students during office hours

Software Engineering Intern | Brain Power   January 2019 - February 2019

- Implemented Google Cloud Vision API and optical character recognition to enable text detection of serial numbers to more efficiently register Google Glass products
- Expanded web application functionality with AngularJS and Node.js for modifying and accessing data

Student Researcher | MIT Digital Humanities Lab   September 2018 - December 2018

Project: Analysis of Gender Descriptions in English-Language Novels (code on GitHub)

- Collaborated with 23 researchers to analyze male and female pronouns in over 4,200 books
- Designed and deployed project website to back-end web server using Python, Flask, and PowerShell

SKILLS

Programming: Python (proficient), JavaScript, HTML, and CSS (familiar)
Libraries and Tools: Pandas, NumPy, and Scikit-Learn (familiar), Git, AngularJS, and Node.js (basic)
World Languages: Spanish and Mandarin Chinese (familiar), English (native)

LEADERSHIP & ACTIVITIES

Associate Advisor | MIT Office of the First Year   May 2019 - Present

- Guide first-year students and faculty advisor on registration process for fall and spring semesters
- Organize and promote academic and social events to help incoming students transition to college

Student Athlete | MIT Varsity Fencing Team   September 2018 - Present

- Commit 10+ hours per week to practices and competitions while balancing full academic course load
- Develop strong work ethic and time management skills to achieve personal and team goals

Computer Science Instructor | Beautiful Patterns Summer Program   May 2019

- Taught basic algorithms and web development to 16 middle and high school girls in Mexico
- Collaborated with team of instructors to create lesson plans and organize hands-on learning activities

HONORS & AWARDS

Rewriting the Code Fellow, Jane Street Women in STEM Participant, National Merit Scholarship Winner, American Invitational Math Exam (AIME) Qualifier, US National Chemistry Olympiad (USNCO) Qualifier