lily.xu@usc.edu lily-x.github.io

EDUCATION

University of Southern California, Los Angeles, CA

PhD Student in Computer Science, 2018 – Advised by Prof. Milind Tambe and Prof. Bistra Dilkina GPA: 4.0

Dartmouth College, Hanover, NH

B.A. with Honors in Computer Science, 2014 – 2018 Minor in Spanish GPA: 3.83 (Magna cum laude)

RESEARCH EXPERIENCE

University of Southern California, Los Angeles, CA

Doctoral Research Assistant

2018 -

• Working on the Protection Assistant for Wildlife Security (PAWS) to combat illegal wildlife poaching, in collaboration with the World Wide Fund for Nature (WWF). Using machine learning and game theory to build predictive models and plan patrols.

Dartmouth College, Hanover, NH

Undergraduate Senior Thesis Researcher

2017 - 2018

• Supervised by Prof. Amro Farid, designed a graphical model of the New England electric grid and performed statistical comparisons with a model produced with hetero-functional graph theory.

Dartmouth College Department of Computer Science, Hanover, NH Presidential Scholar Research Assistant 2016 – 2017

• Supervised by Prof. Emily Whiting, developed a digital reconstruction of the historic Moosilauke Ravine Lodge using photogrammetry. Produced an interactive, VR-compatible model that can be viewed on any modern browser.

WORK EXPERIENCE

Dartmouth College Department of Computer Science, Hanover, NH Teaching Assistant 2015

 Led small-group sections, held office hours, and graded coursework and exams for 11 courses spanning Algorithms, Object-Oriented Programming,
 Foundations of Applied Computer Science, and introductory classes for undergraduates and Tuck MBA students.

Google, Seattle, WA

Software Engineering Intern

Summer 2017

• Prototyped a highly demand feature that automates the scheduling and deletion of infrastructure deployment for the Google Cloud Deployment Manager team. Released work as an open-source project on Google's GitHub.

Dyn, Inc., Hanover, NH

Data Analytics Research Intern

Spring 2016

• Supervised by Dr. Alin Popescu, developed a process to determine zones of statistical significance in large datasets to analyze latency between servers.

HONORS AND AWARDS

Certificate of Appreciation from the SMART Consortium Five Citations for Academic Excellence at Dartmouth College

2018 2014 - 2018

Special distinction rarely awarded by faculty members "for meritorious characteristics not indicated adequately by academic grades."

Computational Photography (Jarosz, CS 89.15)

Latin American Film (Spitta, Spanish 63.01)

Computer Graphics (Whiting, CS 77)

Object-Oriented Programming (Peters, CS 10)

Introduction to Programming and Computation (Farid, CS 1)

Adobe Women-In-Technology Scholarship – Honorable Mention 2017 Rick Angulo World Experience Award 2016

For "intellectual openness, enthusiasm, and impressive academic performance" following a study abroad program in Cusco, Peru. Award in \$2,000.

James O. Freedman Presidential Scholar

Willis S. Fitch '17 Metropolitan Washington Scholarship

Bank of America's Joe Martin Scholarship

National Merit Scholar

2016

2017

2018

2019

2019

2019

TEACHING EXPERIENCE

Worked as a teaching assistant for 11 courses at Dartmouth College beginning in freshman spring. Helped design assignments and course material for the first offering of CS 11, and delivered a guest lecture to 70 students.

- CS 1: Intro to Programming and Computation Fall 2015, Winter 2016, Spring 2017, Fall 2017, Spring 2018
- CS 10: Object-Oriented Programming Spring 2015, Spring 2016
- CS 11: Foundations of Applied Computer Science Spring 2018
- CS 31: Algorithms Winter 2017
- Tuck FWP: Fundamentals of Web Programming Spring 2017
- Tuck DSA: Data Structures and Analytics Spring 2017

SERVICE AND OUTREACH

- Presented AI is for Animals at the World Science Festival Science and Storytime event, attended by 100 elementary school students and parents. New York, NY. (June 2019)
- Hosted a workshop at the Los Angeles Unified School District (LAUSD) **African American Family Day** for students in grades 3–12 and their parents. (May 2019)
- Volunteered as a technical lead at **Hustle N' Code**, a Los Angeles hackathon for youth in public housing developments. My team won first place, and the four students each received a laptop. (December 2018)
- Speaker at the College and Career Day at **Zoo Magnet High School**, presenting *Computer Science for Conservation*. (November 2018)

TECHNICAL SKILLS

Languages: English, Spanish

 ${\it Programming\ languages:\ Python,\ Java,\ C/C++,\ Javascript,\ MATLAB,\ R,\ Bash}$

Packages: PyTorch, TensorFlow, pandas, numpy/scipy, matplotlib

Software: QGIS, Adobe Photoshop, Adobe InDesign