Lily Xu

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EDUCATION

University of Southern California, Los Angeles, CA
PhD Candidate in Computer Science, 2018 – present
Advised by Prof. Milind Tambe and Prof. Bistra Dilkina

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

EXPERIENCE

University of Southern California, Los Angeles, CA
Doctoral Research Assistant August 2018 – present

- Working on the Protection Assistant for Wildlife Security (PAWS) to combat illegal wildlife poaching, in collaboration with the World Wildlife Fund (WWF). Using machine learning, game theory, and discrete optimization to develop predictive models and patrol plans.

Dartmouth College, Hanover, NH
Undergraduate Senior Thesis Researcher September 2017 – June 2018

- Supervised by Prof. Amro Farid, built a traditional graph representation of the New England electric grid and compared the graph with one produced through hetero-functional graph theory.

Dartmouth College Department of Computer Science, Hanover, NH
Presidential Scholar Research Assistant June 2016 – March 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 March 2015 – June 2018

- 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 business students.

Google, Seattle, WA
Software Engineering Intern June 2017 – September 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 January 2016 – April 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

Five Citations for Academic Excellence at Dartmouth College
- Computational Photography (CS 89.15) 2018
- Latin American Film (Spanish 63.01) 2017
- Computer Graphics (CS 77) 2015
- Object Oriented Programming (CS 10) 2015
- Introduction to Programming and Computation (CS 1) 2014

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.

James O. Freedman Presidential Scholar 2016

Willis S. Fitch '17 Metropolitan Washington Scholarship 2015

Bank of America's Joe Martin Scholarship 2014

National Merit Scholar 2014

TEACHING EXPERIENCE

Worked as a teaching assistant for 11 courses at Dartmouth College beginning my freshman winter. Helped design assignments and course material for the first offering of CS 11.

- 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

Volunteer at Hustle N' Code - Hackathon in Los Angeles for youth in public housing developments (December 15, 2018)
Speaker at the College and Career Day at Zoo Magnet High School - *Computer Science for Conservation* (November 16, 2018)

TECHNICAL SKILLS

Programming languages: Python, Java, C/C++, Javascript, MATLAB, R, Bash
Packages: PyTorch, TensorFlow, pandas, numpy/scipy, matplotlib
Software: QGIS, Adobe Photoshop, Adobe InDesign

December 2018: Received certificate of recognition for developing PAWS program to advance the mission of the Spatial Monitoring and Reporting Tool (SMART) for wildlife conservation.