Anna Fang

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Education

Cornell University, College of Engineering
B.S. Computer Science, Magna Cum Laude
GPA: 3.82/4.0
August 2015 - May 2019, Ithaca, New York

Research and Teaching Experience

Cornell University Department of Computer Science • Undergraduate Researcher
Under Professor Kilian Q. Weinberger in Machine Learning
August 2017 - December 2018, Cornell University
- *Created automated program in Python to assign conference papers to time slots according to their similarity measurements and other constraints, in order to organize AAAI 2018*
- *Studied question/answering models with deep learning on the Stanford Question Answering Dataset (SQuAD) using both PyTorch and TensorFlow*

Cornell University Department of Computer Science • Head Teaching Assistant
August 2018 - May 2019, Cornell University
- *Fall 2018, Spring 2019 - Head TA for CS3110: Data Structures and Functional Programming*
- *Taught and organized weekly enrichment sessions to teach students useful tools in CS such as using Git, bash programming, applying for internships, ethics in CS, and more*
- *Mentored undergraduate TAs in teaching methods and acted as a communication channel among course staff members and professor*
- *Taught recitation of 30-40 students twice per week, graded assignments and exams, and gave one-on-one tutoring sessions for struggling students*

Cornell University Department of Computer Science • Teaching Assistant
August 2016 - May 2019, Cornell University
- *Spring 2018, Fall 2017 - TA for CS3110: Data Structures and Functional Programming*
- *Spring 2017, Fall 2016 - TA/Consultant for CS1110: Introduction to Computing Using Python*
- *Taught recitation of 30 students twice per week, graded assignments and exams, held office hours, and gave one-on-one tutoring sessions for struggling students*

National Science Foundation • Research Intern
Under Professor Zina Ben-Miled in Data Analytics
May 2016 - August 2016, Indiana University - Purdue University Indianapolis (IUPUI)
- *Examined the effect of user perspective on news propagation across Twitter utilizing data mining and analytics, sentiment analysis,and data-driven statistical modeling with tools such as Java, R, and the Twitter streaming API*
- *Confirmed that negative user sentiment accelerates news spread across online communities*

Indiana University Purdue University Indianapolis • Research Assistant
Under Arjan Durresi in Trust Systems and Social Networks
May 2014 - August 2014, Indianapolis, Indiana
- *Mined and analyzed social media data in order to explore online trust and usages of keywords across online communities*
- *Examined online trust systems' popular keywords and modeled their effect on real-world events*

Publications

Does Bad News Spread Faster?
Anna Fang, Zina Ben Miled
IEEE International Conference on Computing, Networking, and Communications 2017
January 2017, San Jose, California

Exploring Trust Propagation Behaviors in Online Communities
Yefeng Ruan, Lina Alfantoukh, Anna Fang, Arjan Durresi
International Conference on Network-Based Information Systems 2014
September 2014, Salerno, Italy

Work Experience

Amazon • Software Development Engineer I

eCommerce Platform, Tax and Calculation Engine Team

August 2019 - Present, Seattle, Washington

- *Integrating third-party tax calculation software Vertex into Amazon's existing pricing platform*
- *Using Amazon RDS with mySQL to create, integrate, and deploy databases containing all pricing regulations in Amazon marketplaces worldwide*
- *Using Java to refactor and test existing tax calculation software to increase coverage from 27% to 80%*

Amazon • Software Development Engineer Intern

Personalization, Repeat Purchases ("Buy It Again") Team

May 2018 - August 2018, Seattle, Washington

- *Designed and implemented a rule-based recommendation model for non-consumable products in the "Buy It Again" widget*
- *Used Java and Python to implement predictive algorithm for deeming non-consumable products as repeat purchasable for a given customer (based on factors such as customer mission, item categorization, etc.) and determining when to surface these recommendations*
- *Designed and implemented automation system that generated over 30% increase in coverage of sorting products into browse nodes, a categorization process that underlies all Amazon recommenders*

Cornell University Unmanned Air Systems (CUAir) • Team Lead

Design & Operations Team, Team Lead and Head Project Manager

August 2017 - May 2019, Cornell University

- *CUAir is the #1 fixed-wing autonomous aerial system in the world, competing against over 70 teams at the annual AUVSI SUAS competition*
- *Led a subteam of 8 members handling web development (cuair.org), annual technical paper, graphic design, videography, corporate relations, and recruitment for the team of over 60 members total*
- *Led 2018 recruitment to garner the largest applicant pool to any Cornell project team in history, with >350 applicants (a 30% increase from 2017)*
- *Introduced, designed, and led development of the team's first internal web development projects, including Clio (a graphic design collaboration and feedback tool) and Indigo (a corporate relations and sponsorship management tool)*

The Aerospace Corporation • Software Engineer Intern

Launch Vehicles Team

June 2017 - August 2017, El Segundo, California

- *Designed and implemented a data visualization tool to view and analyze simulated and real-time telemetry data packets in the control room for SpaceX Falcon 9 launches*

Awards

Engineering Dean's List, Spring 2016 - Fall 2016, Fall 2017 - Spring 2019

- *Presented to engineering students with exemplary academic records*

Cornell CS Course Staff Award, May 2019

- *Awarded by Professor Nate Foster for key leadership and mentorship as Head TA for CS3110 in Spring 2019*

Cornell CS Course Staff Award, May 2018

- *Awarded by Professor Nate Foster for significant coursework contributions and teaching as TA for CS3110 in Spring 2018*

Cornell CS Course Staff Award, December 2017

- *Awarded by Professor Michael Clarkson for outstanding student evaluations and teaching as TA for CS3110 in Fall 2017*

Projects and Invited Talks

Plantr, April 2019

- *Developed a convolutional neural network image classification system to classify houseplant species*

PBS National Meeting, May 2018

- *Invited by PBS to speak about algorithmic bias and show short film about AI ethics at the 2018 National Meeting Conference in New Orleans*

American Society for Engineering Education, April 2018

- *Invited by ASEE to speak about current issues in AI ethics and the importance of introducing technology ethics in CS undergraduate education at the ASEE St. Lawrence Conference at Cornell University*

Data Visualizations, December 2017 - May 2019

- *Developed an interactive visualization exploring the correlation between world happiness and corruption levels for each country*
- *Created various models showing frequency of mental health conditions for various demographics and personality traits*
- *Designed and developed numerous audio visualizers using Three.js and WebGL*

Skills

Languages: Java, Python, OCaml, R, Javascript, HTML/CSS, SQL, C, Bash

Software: Git, SVN, TensorFlow, PyTorch, OpenCV, Linux, LaTeX, Adobe Suite (Photoshop, Illustrator, Premiere Pro)