Samsara Counts

Curriculum Vitae

June 2019

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Education

2019 B.Sc. George Washington University *Computer Science and Mathematics*, Minor in Creative Writing

Research Experience

George Washington University | *Researcher* | Fall 2017–Present

- Use deep learning to recognize images of Eating Disorders and build tools to improve patient health outcomes
- Incorporate geometric and combinatorial diversity into the training process to improve classifier accuracy
- Advised by Robert Pless

Microsoft Research | *Intern* | Summer 2018

- Used group theory to speed up matrix multiplication algorithms
- Solved an optimization problem over the search space of finite groups
- Implemented and designed abstract algebraic algorithms in GAP
- Advised by Henry Cohn at Microsoft Research New England

University of Maryland College Park | *Researcher* | Summer 2017

- Designed a multi-armed bandit algorithm to ensure diversity and fairness in an automated admissions process
- Analyzed past admissions data to investigate the possibility of bias in previous decisions
- Designed a system using deep Reinforcement Learning to choose matching policies for dynamic kidney exchange
- Advised by John P. Dickerson at the Combinatorics and Algorithms for Real Problems R.E.U. (7% acceptance rate)

GW Learning Technologies Research Group | *Research Assistant* | August 2016–December 2017

- Used Natural Language Processing to generate reading comprehension questions from input passages
- Developed a mobile app and website using Play framework for adult learners to increase English literacy
- Adapted and improved reading comprehension question-generation algorithm in Java
- Identified high-quality datasets for training NLP algorithms and cleaned datasets using Python and R

Honors and awards

2019	CBYX for Young Professionals Fellowship in Germany	*US Congress and German Bundestag*
2019	Baer Award for Individual Excellence	*GW Center for Student Engagement*
2019	Marvin Green Prize	*GW Department of Mathematics*
2019	NCWIT Collegiate Award, Honorable Mention	*Natl. Center for Women in Information Technology*
2019	Fulbright Open Research Award to Germany Semifinalist	*The Fulbright Commission*
2018	Best Student Paper Presentation	*Applied Imagery and Pattern Recognition Workshop*
2018	Google Lime Scholarship	*Google*
2018	TOMODACHI Kakehashi Inouye Scholar	*TOMODACHI Initiative, US-Japan Council*
2018	NCWIT Collegiate Award, Honorable Mention	*Natl. Center for Women in Information Technology*
2018	Susan Shin Memorial Award	*GW School of Engineering and Applied Science*
2018	Quip Diversity in Tech Scholarship, Runner Up	*Quip*
2018	Lannan Foundation Poetry Fellow	*Folger Shakespeare Library*
2018	Academy of American Poets Contest, Honorable Mention	*GW English Department*
2017	AnitaB.org Grace Hopper Conference Scholar	*AnitaB.org*
2016	Summer Undergraduate Program in Engineering Research	*GW School of Engineering and Applied Science*
2016	1st Place, Citizen Day Poetry Contest	*GW English Department*

Grants

2018 GW Undergraduate Research Award. “Multimodal Detection of Deviant Content Online". $5000
Funding from the GW Office of the Vice President of Research.

2018 GW Data MASTER Fellowship. “Recognizing Images of Eating Disorders with Deep Learning". $3000
Funding from the National Science Foundation.

2017 HackHarassment Grant. “A Research-based Hackathon to Combat Online Harassment". $2000
Funding from Intel and the Born This Way Foundation.

Publications

Papers in refereed conference proceedings

1. Schumann, C., S. N. Counts, J. Foster, and J. P. Dickerson (2019). The Diverse Cohort Selection Problem. In: *International Conference on Autonomous Agents and Multi-Agent Systems (AAMAS)*. Montréal, Québec. `https://arxiv.org/abs/1709.03441`.

Workshop papers

1. Pless, R., R. Begtrup, L. Alkulaib, S. N. Counts, J. Harnett, J.-L. Manning, H. Xuan, and D. A. Broniatowski (2017). Recognizing Images of Eating Disorders in Social Media (Abstract). In: *Social Media Mining for Health Applications Workshop at Conference of the American Medical Informatics Association (AMIA)*. Washington, DC.
2. Counts, S. N., J.-L. Manning, and R. Pless (2018). Characterizing the Visual Social Media Environment of Eating Disorders. In: *Applied Imagery Pattern Recognition Workshop (AIPR)*. Washington, DC.

Talks and panels

- *Characterizing the Visual Social Media Environment of Eating Disorders*, Applied Imagery and Pattern Recognition Workshop, Washington, October 2018. **Best Student Paper Presentation**
- *2018 Panel of Computing Students with Disabilities* (with R.E. Ladner, R. Ayanzadah, K. Krishnaswami and K. Wolfe), SIGCSE Conference, Baltimore, February 2018.
- *The Diverse Cohort Selection Problem*, GW Chapter of the Association for Computing Machinery, Washington, February 2018.
- *Recognizing Images of Eating Disorders with Deep Learning*, GW Dean's Council of Women in Technology, Washington, January 2018.
- *Creating Technological Solutions to Combat Online Harassment*, Hackital, Washington, November 2017.

Poster presentations

- *Deep Learning Tools for Eating Disorder Recovery*
  - GW Research Days, Washington, April 2019
- *Recognizing Images of Eating Disorders in Social Media*
  - GW Research Days, Washington, April 2018. **2nd Place for Best Engineering Poster**
  - GW SEAS R&D Showcase, Washington, February 2018. **Finalist for Best Undergraduate Poster (Theoretical)**
- *The Diverse Cohort Selection Problem*
  - GW SEAS R&D Showcase, Washington, February 2018. **Finalist for Best Undergraduate Poster (Theoretical)**
  - Aligned AI Workshop at NIPS-17, Long Beach, December 2017.
  - Women in Machine Learning (WiML) Workshop at NIPS-17, Long Beach, December 2017.

Teaching

2018	Introduction to Software Development	*Teaching Assistant*	George Washington University
2018	Discrete Structures II	*Learning Assistant*	George Washington University
2017	Introduction to Computer Science	*Learning Assistant*	George Washington University
2017	Algorithms and Data Structures	*Learning Assistant*	George Washington University
2016	Introduction to Computer Science	*Learning Assistant*	George Washington University
2015	8th Grade Chemistry	*Teaching Fellow*	Breakthrough Collaborative
2014	8th Grade Chemistry	*Teaching Assistant*	Breakthrough Collaborative

Languages & technology

Languages: Python, Java, C, MATLAB, LaTeX, Bash, HTML, CSS, SQL, GAP

Software: Git, PyTorch, Mathematica, Django

Spoken Languages: Spanish (proficient), English (native)

Involvement and service

2016-2019	Academic Affairs Chair	GW Association for Computing Machinery
2016-2019	Mentor	SEAS Student Peer Advisory Network
2016-2019	Mentor	GW Women in Computer Science
2017-2018	Founder and Chair	GW Dean's Council of Women in Technology
2017-2018	Organizer	Hackital
2016	Camp Counselor	GW Cybersecurity Camp for Middle School Girls
2015-2016	Freshman Representative	The Association of Queer Women and Allies

Technical workshops

2017-2019	Git, Command Line, and Linux Workshop	GW Association for Computing Machinery
2018	Have a Productive Programming Summer	GW Association for Computing Machinery

Large-scale events organized

2019	kc claffy: 10 Things You Need to Know About the Internet	Internet Distinguished Speaker Series, GW Dept. of Computer Science
2019	Vint Cerf: The Unfinished Internet	Internet Distinguished Speaker Series, GW Dept. of Computer Science
2018	Christine Darden: One of NASA's Hidden Figures	GW Black History Month, GW Dean's Council of Women in Technology
2017	Hackital	GW Association for Computing Machinery