Samsara Counts
Curriculum Vitae

December 2020

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 samsaranc

Education

| 2015-2019 | B.S. | George Washington University | *Computer Science and Math*, Creative Writing minor | GPA 3.5/4.0 |
| 2019-2020 | | Saarland University | *Data Science and Artificial Intelligence* | visiting student |

Professional Experience

Amazon Web Services| *Software Development Engineer* | September 2020–Present

- Work on the Privacy Prism team of Alexa Secure AI Foundations (SAIF)
- Develop and mantain an Alexa AI-wide service to detect private data in input text
- Collaborate with science teams to deploy state-of-the-art machine learning models to detect private data

Research Experience

Max Planck Institute for Software Systems | *Research Intern* | October 2019–August 2020

- Investigate mechanisms of incorporating fairness and diversity in Machine Learning algorithms
- Compile an extensive literature review on ethical interventions in computer science research
- *Advised by Krishna Gummadi and funded by the CBYX for Young Professionals Fellowship*

George Washington University | *Research Assistant* | September 2017–May 2019

- Used deep learning to recognize pro-Eating Disorder (pro-ED) images in online communities
- Wrote Python scripts to gather 100K training images from Tumblr and Twitter using pro-ED keywords
- Built dynamic webapp for ED clinicians to assess the content of an input website with classifier
- Built Google Chrome Extension using classifier to detect and filter pro-ED media during browser sessions
- *Advised by Robert Pless*

Microsoft Research | *Research Intern* | Summer 2018

- Used group theory to speed up matrix multiplication by finding finite groups amenable to fast embeddings
- Implemented the Triple and Quadruple Product Properties in GAP to identify optimal groups
- Designed and deployed parallel abstract-algebraic algorithms searching for groups on multi-core server
- *Advised by Henry Cohn at Microsoft Research New England*

University of Maryland College Park | *Research Intern* | 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. (10% acceptance rate)*

GW Learning Technologies Research Group | *Research Assistant* | May 2016–May 2017

- Used Natural Language Processing to generate reading comprehension questions from input passages
- Added features to Play framework webapp designed to help adult learners improve their English literacy
- Created high-quality datasets for training NLP algorithms from children's texts, cleaning datasets with Python
- *Advised by Rahul Simha, funded by the GW SEAS Summer Undergraduate Program in Engineering Research*

Honors and awards

2019	CBYX for Young Professionals Fellowship in Germany	*US Congress and German Bundestag*
2019	Invitation to the Heidelberg Laureaute Forum	*Heidelberg Laureaute Forum Scientific Committee*
2019	NCWIT Collegiate Award, Honorable Mention	*Natl. Center for Women in Information Technology*
2019	Baer Award for Individual Excellence	*GW Center for Student Engagement*
2019	Marvin Green Prize	*GW Department of Mathematics*
2019	Fulbright Open Research Award to Germany Semifinalist	*The Fulbright Commission*
2018	Best Student Paper Presentation	*IEEE 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, GW English Dept.*
2017	Operating Systems Hall of Fame	*GW Operating Systems course*
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

2019	CRA Distributed Research Experiences for Undergraduate Award (declined). "Deep Learning Tools for Eating Disorder Recovery". *Funding from the Computing Research Association and the National Science Foundation.*	$7000
2018	GW Undergraduate Research Award. "Multimodal Detection of Deviant Content Online". *Funding from the GW Office of the Vice President of Research.*	$5000
2018	GW Data MASTER Fellowship. "Recognizing Images of Eating Disorders with Deep Learning". *Funding from the National Science Foundation.*	$3000
2017	HackHarassment Grant. "A Research-based Hackathon to Combat Online Harassment". *Funding from Intel and the Born This Way Foundation.*	$2000

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. `http://www.ifaamas.org/Proceedings/aamas2019/pdfs/p601.pdf`.

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.

Selected talks and panels

➤ *It's Nothing Personal: Investigting Bias in the ImageNet Person Synset*, GW Bias in Artificial Intelligence course, Washington, May 2019.

➤ *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

Fall 2018	Introduction to Software Development	*Teaching Assistant*	George Washington University
Spring 2018	Discrete Structures II	*Learning Assistant*	George Washington University
Fall 2017	Introduction to Computer Science	*Learning Assistant*	George Washington University
Spring 2017	Algorithms and Data Structures	*Learning Assistant*	George Washington University
Fall 2016	Introduction to Computer Science	*Learning Assistant*	George Washington University
Summer 2015	8th Grade Chemistry	*Teaching Fellow*	Breakthrough Collaborative
Fall 2014	7th Grade Literature	*Teaching Fellow*	Breakthrough Collaborative
Summer 2014	8th Grade Chemistry	*Teaching Assistant*	Breakthrough Collaborative

Languages and technology

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

Software: Git, PyTorch, Mathematica, Django

Spoken Languages: German (B1), Spanish (B2), English (native)

Involvement and service

2019-2020	US Junior Ambassador in Germany	United States Department of State
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 organized

2017, 2018, 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 community events organized

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

Educational workshops attended

| 2020 | HUMAINT Winter School on Fairness, Accountability, and Transparency in AI | European Commission Joint Research Centre |