

Katy Williams

PhD Student, Computer Science, University of Arizona

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EDUCATION

University of Arizona

Tucson, AZ

PhD student in Computer Science (expected completion May 2023)

August 2017 - present

- GPA: 3.44/4.0
- Research interest: Visualizing execution information in high-performance computers
- Relevant courses: Advanced Data Visualization, Topological Analysis in Visualization

Master's Degree in Computer Science

Received in December 2019

Davidson College

Davidson, NC

Bachelor of Science in Computer Science, Minor in Mathematics

May 2017

- GPA: 3.24/4.0
- Relevant courses: Data Visualization, Machine Learning, Numerical Analysis, Analysis of Algorithms, Concurrent and Parallel Computing, Computer Organization, Artificial Intelligence

PUBLICATIONS

1. K. Williams, A. Bigelow, and K. E. Isaacs. Visualizing a moving target: A design study on task parallel programs in the presence of evolving data and concerns. *To appear in IEEE Transactions on Visualization and Computer Graphics (Proceedings of InfoVis '19)*, Jan. 2020
2. R. Tohid, B. Wagle, S. Shirzad, P. Diehl, A. Serio, A. Kheirkhahan, P. Amini, K. Williams, K. Isaacs, K. Huck, S. Brandt, H. Kaiser. Asynchronous Execution of Python Code on Task Based Runtime Systems. In *IEEE/ACM 4th International Workshop on Extreme Scale Programming Models and Middleware (ESPM2'18)*, SC '18, November 2018.

PRESENTATIONS AND POSTERS

1. K. Williams. Visualizing Large-Scale Distributed Computing Expression Evaluation. At *2018 CRA-W Grad Cohort for Women*, April 2018.

WORK & RESEARCH EXPERIENCE

TRAVELER

Tucson, AZ

Research Assistant

January 2018 – present

- Graduate visualization researcher for TRAVELER team (Task Runtime Analysis and Visualization for Execution Log Exploration and Research) as part of Phylanx project in collaboration with LSU and University of Oregon
- Created usable, interactive tree diagrams for the Phylanx development team to analyze and compare the performance of their library

SwimNerd

Virginia Beach, VA

Intern: Web Developer

May – August 2019

- Developed swimnerd.com, a recruiting database for prospective collegiate swimmers to see how their best times compare at a division, conference, and team level
- Refined both the frontend and backend interfaces with HTML, PHP, and MySQL code for a better user experience

Project PRONTO

Davidson, NC

Member of Student Web Application Developer Team

May 2016 – Aug 2016

- Selected as a member of Project PRONTO (Productive Online Tools), a team of student programmers that build web applications to help streamline processes at Davidson College and in the community
- Collaborated with a team of three to learn web application development using Flask and how to integrate new and existing tools to the school SQL database

Student Web Application Developer

June 2015 – August 2015

- Learned how to develop web-based tools and grew programming abilities under the guidance of Dr. Heyer with the result of engineering several tools for campus and community partners, such as the Charlotte Community ToolBank

LEADERSHIP & OTHER EXPERIENCES

Secretary and Social Chair on the Computer Science Graduate Student Council	University of Arizona <i>October 2018 – present</i>
Student Volunteer at IEEE Vis 2019	Vancouver, Canada <i>October 20-25, 2019</i>
Student Volunteer at IEEE Vis 2018	Berlin, Germany <i>October 21-26, 2018</i>
Student Volunteer at SC18	Denver, CO <i>November 11-26, 2018</i>
Captain and member of Davidson College Swimming and Diving Team	Davidson, NC <i>August 2013 – February 2017</i>
Co-President of FICSIT (Females in Computer Science and Information Technology)	Davidson, NC <i>January 2016 – May 2017</i>

SKILLS

- Programming languages: Python, Java, C++, JavaScript, d3, HTML, CSS, Flask, PHP, MySQL, SQLAlchemy
- Applications: Jupyter Notebook, Docker, MatLab,
- Github: kawilliams
- Operating systems: Windows (8, 10), Mac OS