

Rebecca Faust

PhD Student
Department of Computer Science
University of Arizona

Email: rjfaust@email.arizona.edu
Web: rjfaust.github.io

Research Interests

- Data Visualization, Exploratory Data Analysis

Education

PhD in Computer Science
M.S. in Computer Science
University of Arizona
Advisor: Carlos Scheidegger

Aug. 2016 - Present
Aug. 2016 - May 2020
Tucson, AZ

Bachelor of Science in Computer Science
Bachelor of Arts in Mathematics
University of Montana
GPA: 3.94, High Honors

Aug. 2012 - May 2016
Aug. 2012 - May 2016
Missoula, MT

Research Projects

Anteater

June 2017 - Present

- Interactive Visualization for Program Understanding
- Understanding Diffs of Program Traces Through Interactive Visualization

DimReader

Sept. 2016 - June 2018

- Axis Lines to Explain Non-Linear Projections

Publications

- *DimReader: Axis Lines that Explain Non-linear Projections*. R. Faust, D. Glickenstein, C. Scheidegger. IEEE Transactions on Visualization and Computer Graphics (Proceedings of IEEE VIS 2018, 25.7% acceptance rate)
- *Anteater: Interactive Visualization for Program Understanding*. R. Faust, K. Isaacs, W. Bernstein, M. Sharp, C. Scheidegger. Arxiv, arXiv:1907.02872.

Honors and Awards

NIST GMSE Fellowship	May 2018 - Present
University of Arizona Computer Science Graduate Teaching Award	May 2021
University of Arizona Computer Science Graduate Research Award	May 2019
Galileo Circle Scholar	May 2018
University of Arizona Graduate Fellowship	Aug. 2016
Mortar Board Outstanding Senior Award in Computer Science	May 2016
Mortar Board Outstanding Senior Award in Mathematics	May 2016
Montana University System Scholarship - full tuition waiver	Aug. 2012 - May 2016
University of Montana Honors Scholarship	Aug. 2012 - May 2016

Teaching

Instructor - University of Arizona Summer 2020

- CSc 245 - Introduction to Discrete Structures (Remote/Online)
Instructed a class of about 60 students. The course was taught fully online.

Talks

- “DimReader: Axis Lines that Explain Non-Linear Projections”, IEEE VIS Conference, Berlin, Germany, October 23, 2018

Service

Conference Reviewer: IEEE VIS, Eurovis.

Department and University Service:

- Treasurer Sept. 2018 - May 2020
Graduate Student Council
University of Arizona Computer Science Department
- Graduate Student Member Mar. 2018 - May 2018
Department Head 5-year Review Committee
- Graduate Student Member Sept. 2019 - Feb. 2020
Computer Science Department 7-year Academic Program Review Committee

Work Experience

Engineering Laboratory, NIST	Gaithersburg, MD
GMSE Summer Fellow	June - Aug. 2018, June - Aug. 2019
<ul style="list-style-type: none">• Understanding and debugging data science programs from program traces using visualization	

Department of Computer Science, The University of Arizona
Research Assistant

Tucson, AZ
Aug. 2016 - Present

- DimReader- Explaining nonlinear dimensionality reductions through the small perturbations of data
- Anteater - Interactive visualization of program executions for debugging and understanding

Agile Data Solutions
Software Testing and Development

Missoula, MT
May 2014 - Dec. 2015

- Testing and front end development of the content categorization software developed by Agile Data Solutions

Computer Skills

Programming Languages: Python, Javascript, HTML, C/C++, SQL, C#, R

Libraries and Tools: Numpy, Scikit learn, D3, Vega-lite