

Education

- 2023 **Ph.D. in Computer Science**, *Washington University in St. Louis*, St. Louis, MO.
Advisors: Drs. Alvitta Ottley and Roman Garnett
Dissertation Title: Learning from User Interactions and Providing Guidance in Visual Data Analysis
- 2020 **M.S. in Computer Science**, *Washington University in St. Louis*, St. Louis, MO.
- 2018 **B.S. in Computer Science with Honors**, *The University of Texas at Dallas*, Richardson, TX.
Minor in Mathematics, Cum Laude, Collegium V Honors, Computing Scholars Honors

Research Experience

- Aug. 2023 - **Visual Analytics Research Scientist**, *Oak Ridge National Laboratory*, Oak Ridge, TN.
Data Science and Visualization Group, Cyber Resilience and Intelligence Division
- Jun. 2021 - Aug. 2023 **Graduate Pathways Research Intern**, *NASA Ames Research Center*, Moffett Field, CA.
Data Science Group (DSG), Mentors: Drs. Nikunj Oza and Rodney Martin
- Aug. 2018 - Aug. 2023 **Graduate Research Assistant**, *Washington University in St. Louis*, St. Louis, MO.
Visual Data Analysis Group (VDAG), Mentors: Drs. Alvitta Ottley and Roman Garnett
- Jun. 2018 - Aug. 2018 **Research Intern**, *NASA Johnson Space Center*, Houston, TX.
Space Radiation Analysis Group (SRAG), Mentor: Dr. Shaowen Hu
- Jun. 2017 - Aug. 2017 **Data Visualization Research Intern**, *Washington University in St. Louis*, St. Louis, MO.
Big Data Analytics REU Program, Mentor: Dr. Alvitta Ottley
- Jun. 2016 - Aug. 2016 **Data Mining Research Intern**, *Washington State University*, Pullman, WA.
Smart Environments REU Program, Mentors: Drs. Mohammad Hossein Namaki and Yinghui Wu

Teaching Experience

- Jan. 2021 - May 2021 **Assistant Instructor**, *Washington University in St. Louis*, St. Louis, MO.
Course: Advanced Visualization (CSE 557A)
- Oct. 2019 - Oct. 2020 **Instructor**, *The Coding School*, Online.
Courses: Introduction to Programming in Python, Introduction to Artificial Intelligence
- Aug. 2015 - May 2018 **Math Lab Peer Tutor and Team Leader**, *The University of Texas at Dallas*, Richardson, TX.
Courses: College Algebra (MATH 1306), Pre-Calculus (MATH 2312), Calculus (MATH 1325, 1326, 2413, 2414, 2417, 2419), Linear Algebra (MATH 2418)

Publications

- 2023 **Shayan Monadjemi**, Mengtian Guo, David Gotz, Roman Garnett, and Alvitta Ottley. Human-Computer Collaboration for Visual Analytics: an Agent-based Framework. *Computer Graphics Forum*, 2023.
- 2023 Daniel Weckler, Bryan Matthews, **Shayan Monadjemi**, Shawn Wolfe, Nikunj Oza, and Hossein Eskandaripour. Monitoring airspace complexity and determining contributing factors. In *AIAA SciTech Forum and Exposition*, 2023.
- 2022 **Shayan Monadjemi**, Sunwoo Ha, Quan Nguyen, Henry Chai, Roman Garnett, and Alvitta Ottley. Guided Data Discovery in Interactive Visualizations via Active Search. *IEEE Transactions on Visualization and Computer Graphics*, 2022.
- 2022 Sunwoo Ha, **Shayan Monadjemi**, Roman Garnett, and Alvitta Ottley. A Unified Comparison of User Modeling Techniques for Predicting Data Interaction and Detecting Exploration Bias. *IEEE Transactions on Visualization and Computer Graphics*, 2022.
- 2022 Sneha Gathani, **Shayan Monadjemi**, Alvitta Ottley, and Leilani Battle. A grammar-based approach for applying visualization taxonomies to interaction logs. *Computer Graphics Forum*, 2022.

- 2020 **Shayan Monadjemi**, Roman Garnett, and Alvitta Ottley. Competing Models: Inferring Exploration Patterns and Information Relevance via Bayesian Model Selection. *IEEE Transactions on Visualization and Computer Graphics*, 2020.
- 2020 Shaowen Hu, **Shayan Monadjemi**, Janet E. Barzilla, and E. Semones. Acute radiation risks tool (ARRT) development for the upcoming human exploration missions. *Space Weather*, 18(12), 2020.
- 2020 Christabel Wayllace, Sunwoo Ha, Yuchen Han, Jiaming Hu, **Shayan Monadjemi**, William Yeoh, and Alvitta Ottley. DRAGON-V: Detection and Recognition of Airplane Goals with Navigational Visualization. *Proceedings of the AAAI Conference on Artificial Intelligence*, 34(09):13642–13643, 2020.

Technical Skills

Languages: Python, Java, MATLAB, R, C# Script, HTML, CSS, PHP, JavaScript, \LaTeX

Libraries: React, Flask, Django, NodeJS, D3.js, Numpy, Pandas, Scikit-Learn, Plotly

Tools: Linux, Git (Command Line), MySQL, Jet Brains IDEs, Neo4j Graph Database, Cloud-based Servers

Professional Service

Conference Reviewing

- 2023 EuroVIS Conference on Visualization
- 2022 Visualization for Data Science (VDS) Program Committee Member.
- 2022 IEEE Conference on Visual Analytics Science and Technology (VAST).
- 2020 IEEE Conference on Visual Analytics Science and Technology (VAST).
- 2020 ACM Conference on Human Factors in Computing Systems (CHI) Late-Breaking Work.

Extracurricular and Leadership

Washington University in St. Louis

- 2019 - 2020 Department Representative, *Center for Teaching and Learning Graduate Student Advisory Group*.
- 2018 - 2020 Department Representative, *Graduate Student Senate*.

The University of Texas at Dallas

- 2016 - 2017 Elected Council Member, *Collegium V Honors Program Student Board*.
- 2015 - 2017 Director of Industry, *Association of Computing Machinery Student Chapter*.
- 2015 - 2018 Volunteer Peer Mentor, *Freshman Mentor Program*.
- 2015 - 2018 Member, *Linux Users Group*.
- 2015 - 2018 Percussionist, *Wind Ensemble*.

Honors and Awards

- 2018 Honorable Mention, *National Science Foundation Graduate Research Fellowship Program*.
- 2018 Dean's Select Fellowship, *Washington University in St. Louis*.
- 2015 - 2018 Academic Excellence Scholarship for Continuing Students, *The University of Texas at Dallas*.
- 2015 Engineering Academic Success Scholarship, *The University of Texas at Dallas*.