Saugat Pandey

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iamsaugatpandey.github.io
Github Linkedin

Education

June 2026 (expected) **PhD, Computer Science & Engineering**, *Washington University in St. Louis*, Missouri, USA.
Advisor: Dr. Alvitta Ottley

2021 - 2024 **Master in Computer Science**, *Washington University in St. Louis*, Missouri, USA.
Advisor: Dr. Alvitta Ottley

2017 - 2021 **Bachelor of Science, Computer Science & Mathematics**, *Beloit College*, Wisconsin, USA.
Advisor: Dr. Eyad Haj Said

Awards & Honors

2023 Earned **top 15-20% Departmental Honors** in the Department of Computer Science and Engineering through annual review consensus at Washington University in St. Louis.

2023 **Best Paper Award** for "Mini-VLAT: A Short and Effective Measure of Visualization Literacy" at *The Eurographics Conference on Visualization (EuroVIS)* 2023 (Germany).

2021 **Conwell-Huffer Endowed Prize in Mathematics** for outstanding senior mathematics or computer science student at Beloit College.

2020 **Walter S. Haven Physics/Astronomy Prize** for outstanding summer research project at Beloit College, Wisconsin.

Publications

Preprints and Working Manuscripts

2025 **Estimating PM2.5 at North Carolina Public School Locations: A Comparative Study of Data Sources and Interpolation Methods**
Rachel Carroll, Paul Bailey, Saugat Pandey, Dana McCalla, and Thomas Snyder
Manuscript in Preparation

2025 **Beyond the Classroom: Environmental Determinants of Student Achievement in North Carolina**
Rachel Carroll, Dana McCalla, Paul Bailey, Saugat Pandey, and Thomas Snyder
Manuscript in Preparation

2025 **Mapping Visualization Literacy Across Seven Countries: An Online Comparative Study**
Saugat Pandey and Alvitta Ottley
Under Review at IEEE VIS 2025

2025 **Style Matters: A Cross-Organizational Study of Visualization Guidelines**
Saugat Pandey, Lemara Williams, Mia Hines, and Alvitta Ottley
Under Review at IEEE VIS 2025

Journal & Peer Reviewed Conference Papers

2025 **Benchmarking Visual Language Models on Standardized Visualization Literacy Tests** DOI
Saugat Pandey and Alvitta Ottley
Computer Graphics Forum (CGF). Also in Proceedings of 27th eg Conference on Visualization **(EuroVis)** — (Acceptance Rate: 27%)

2025 **Trustworthy by Design: The Viewer's Perspective on Trust in Data Visualization** DOI
Oen McKinley, Saugat Pandey, and Alvitta Ottley
Proceedings of the ACM CHI Conference on Human Factors in Computing Systems **(ACM CHI)** — (Acceptance Rate: 24.5%)

Building and Eroding: Exogenous and Endogenous Factors that Influence Subjective Trust in Visualization DOI

2024 R. Jordan Crouser, Syrine Matoussi, Lan Kung, Saugat Pandey, Oen McKinley, and Alvitta Ottley
IEEE Visualization & Visual Analytics
(IEEE VIS) — (Acceptance Rate: 23.2%)

Do you trust what you see? toward a multidimensional measure of trust in visualization DOI

2023 Saugat Pandey, Oen McKinley, R. Jordan Crouser, and Alvitta Ottley
IEEE Visualization and Visual Analytics
(IEEE VIS) — (Acceptance Rate: 25.8%)

Mini-VLAT: A Short and Effective Measure of Visualization Literacy DOI

2023 Saugat Pandey and Alvitta Ottley
Computer Graphics Forum (CGF). Also in Proceedings of 25th eg Conference on Visualization
Best Paper Award **(EuroVis 2023)** — (Acceptance Rate: 27%)

Workshop Papers and Lightly-Reviewed Articles

User Engagement with COVID-19 Visualizations on Twitter DOI

2023 Robert Kasumba, Saugat Pandey, Vishesh Patel, Micah Wolfson, and Alvitta Ottley
IEEE VIS Workshop on Visualization for Communication (VisComm) 2023

Teaching Experience

Co-Instructor
Fall 2024 **Course:** Introduction to Visualization
Washington University in St. Louis
Overall Score: ***6.67/7*** *(Department Avg:* ***6.11/7****, School Avg:* ***6.18/7****)*

Undergraduate Teaching Assistant
2017 - 2021 **Courses:** Introduction to Object-Oriented Programming, Data Structures & Algorithms, Discrete Structures, Computer Architecture, & Fundamentals of Physics
Beloit College, Beloit, WI

Presentations

2023 Presented paper titled "Mini-VLAT: A Short and Effective Measure of Visualization Literacy" at EuroVIS 2023 (Leipzig, Germany)

2022 Presented paper titled "User engagement with covid-19 visualizatios on twitter" at IEEE VIS Workshop on Visualization for Communication 2023 (Oklahoma City, OK)

2018 Poster Presentation, Midstates Consortium for Math and Science at Washington University in St. Louis

Grants & Funded Research

I have been funded by and contributed to the following National Science Foundation grants.

HDR Institute: Institute for Data Driven Dynamical Design
Amount: $15,540,749
Agency: National Science Foundation
Principal Investigator: Dr. Eric Toberer (Colorado Mines)
Co-Principal Investigators: Dr. Ryan Adams (Princeton), Dr. Alvitta Ottley (WashU), Dr. Steven Lopez (Northeastern), and Dr. Adji Bousso Dieng (Princeton)
Your Role: Graduate Research Assistant
Contribution: Currently supported by this grant. Investigated visualization literacy of visual language models (VLMs) and compared their capabilities with those of human participants.

CAREER: Context-Aware Visual Analytics Systems: Evolving the One-Size-Fits-All Approach to Design and Evaluation
Amount: $528,223
Agency: National Science Foundation
Principal Investigator: Dr. Alvitta Ottley
Your Role: Graduate Research Assistant
Contribution: Collaborated on the development of an adaptive visualization evaluation framework. Contributed to research on visualization literacy in both humans and visual language models (AI), and co-led investigations into trust in visualizations. These efforts resulted in several peer-reviewed publications.

Research Experience

Visual Interface and Behavior Exploration Lab (VIBE) @ Washington University

2021 - ***Graduate Research Assistant***.
Conduct research on visualizations and human perception, design user studies, and apply AI/ML (e.g., MLLMs and Computer Vision) to improve visualization literacy and communication.

Skills: Data Visualization, Statistical Analysis, Psychometrics, Crowdsourcing, AI/ML, Computer Vision, MLLMs, Fine tuning, Prompt engineering, UX Design

American Institutes for Research | Arlington, VA

2024 ***Doctoral Student Research Intern***.
Developed interactive visual analytics tools and conducted data-driven analyses to explore environmental impacts on education outcomes using air quality and national assessment datasets.

Skills: D3.js, React.js, Node.js, Statistical Analysis (Descriptive & Inferential), Data Visualization, API Data Extraction, Clustering Algorithms, Large Scale Data Analysis

The Brent Lab @ Washington University

2021 ***Graduate Research Assistant***.
Built image processing and deep learning pipelines (OpenCV + PyTorch) to automate fungal microscopy analysis, enabling efficient segmentation and phenotype classification.

Skills: Python, OpenCV, Image Processing, PyTorch, CNN, Deep Learning

Mentorship

Name	Current Position	Year	Context
Hangxiao Zhu	Ph.D. Student @ Texas A&M	2024	Master Thesis
Danni Liu	Ph.D. Student @ UChicago	2023	Undergraduate Research Assistant
Amee Rothman	Data Visualization Manager @ UNHCR	2023	Undergraduate Research Assistant

Academic Service

Organizing Committee
Visualization in Data Science (VDS) @ IEEE VIS 2024 *(Web Chair and Paper Session Chair)*

Conference Reviewer
ACM Conference on Human Factors in Computing Systems (CHI) 2025
IEEE Visualization Conference (VIS) 2024
Visualization in Data Science (VDS) @ IEEE VIS 2024
IEEE Pacific Visualization Conference (PacificVis) 2023
Visualization for Commounication (VisComm) Workshop @ IEEE VIS 2022-2023

Professional & Leadership Experience

2024 **President**, *Association of Graduate Engineering Students (AGES)*, Washington University in St. Louis.

2023-2024 **Consultant**, *The Biotechnology and Life Science Advising (BALSA)*, St. Louis, MO.

2019-2021 **Co-Founder & President**, *Beloit Investment Club*, Beloit College.

2019 **Funding Board Director**, *Beloit Student Government*, Beloit College.