Joseph Harrison

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Education

North Carolina State University Start Aug 2024
PhD Candidate

Virginia Polytechnic Institute and State University May 2024
Bachelor of Science in Computational Modeling and Data Analytics *GPA: 3.73/4.0*
Bachelor of Science in Statistics

Rockbridge County High School (Dual Enrollment at Dabney S. Lancaster) June 2020
Advanced Studies Diploma *GPA: 4.22/4.0*

Interests

Imprecise Probability, Statistical Foundations, Pedagogy, Statistical Inference, Learning Algorithms

Courses Taught

Introduction to Statistics (ST 311). 2025–2026

Hybrid instructor (Fall 2025, Spring 2025), Instructor (Fall 2026, Spring 2026)

Honors and Awards

Statistics Undergraduate Research Award	May 2024
Nominated for the College of Science Outstanding Undergraduate Award	March 2024
Outstanding Senior Award in CMDA	March 2024
Dean's List at Virginia Tech	2020-2024
Honors College Scholarship	April 2022
Clyde Kramer Scholarship (For success in Statistics)	August 2022
Alice and Luther Hamlett Scholarship (For excellency in CMDA)	March 2022
Virginia Tech National Security Institute & Hume Center IC CAE Research Fellow	Aug. 2021 - Aug. 2022
Intelligence Community Centers for Academic Excellence (IC CAE) Scholar	Aug. 2020 - July 2021

Peer-reviewed Publications/Proceedings

Da Re, D., Andreo, V., San Miguel, T.V., Blaha, M., Rosa, R., Rizzoli, A., **Harrison, J.**, Sorek, S., Johnson, L., Huxley, P. (2025, December). AedesTraits: A global dataset of temperature–dependent trait responses in Aedes mosquitoes. Sci Data 12, 2033 (2025). https://doi.org/10.1038/s41597-025-06461-z

Harrison, L., **Harrison, J. R.**, Boswell, M. G., & Michaels, A. J. (2022, October). A Hierarchical Database of One Million Websites. In 2022 IEEE Secure Development Conference (SecDev) (pp. 67-68). IEEE.

Harrison, J., Lyons, J., Anderson, L., Maunder, L., O'Donnell, P., George, K. B., & Michaels, A. J. (2021, November). Quantifying use and abuse of personal information. In 2021 IEEE International Conference on Intelligence and Security Informatics (ISI) (pp. 1-6). IEEE.

Maunder, L., Lyons, J., Anderson, L., **Harrison, J.**, Timana-Gomez, B., O'Donnell, P., George, K. B., & Michaels, A. J. (2021, November). Identifying Corporate Political Trends Online. In 2021 IEEE International Conference on Intelligence and Security Informatics (ISI) (pp. 1-6). IEEE.

O'Donnell, P., **Harrison, J.**, Lyons, J., Anderson, L., Maunder, L., Ramboyong, S., & Michaels, A. J. (2021, October). Quantitative rubric for privacy policy analysis. In International Workshop on Data Privacy Management (pp. 39-54). Cham: Springer International Publishing.

Conference Presentations

A Hierarchical Database of One Million Websites: Poster at the 2022 IEEE Secure Development Conference (SecDev). 18 October 2022

Use and Abuse of Personal Information – Collection: Poster Talk at the 2022 National Security Education Program Colloquium. 12 April 2022

Use and Abuse of Personal Information: Poster at the 2022 Commonwealth Cyber Initiative (CCI) Symposium. 04 April 2022

Accommodation in Singaporean English: Poster at the 2022 Dennis Dean Undergraduate Research and Creative Scholarship Conference. 29 April 2022

Quantitative Rubric for Privacy Policy Analysis: Poster Talk at the 2021 European Symposium on Research in Computer Security (ESORICS) and 16th International Workshop on Data Privacy Management. 05 October 2021

Captioning chefs: Examining ideologies of intelligibility through selective subtitles in Diners, Drive-Ins and Dives: Poster Talk at 2021 Virginia Area Linguistics (VALING). April 17, 2021

Diners, Drive-Ins and Dialects: Poster Talk at the 2021 Southeastern Conference on Linguistics (SECOL). May 13, 2021

Diners, Drive-Ins and Dialects: Poster at the 2021 Dennis Dean Undergraduate Research and Creative Scholarship Conference. April 30 2021

Research & Experience

Use and Abuse of Personal Information | *Student Researcher* August 2020 – August 2022

- Published three papers (in IEEE and ACM) pertaining to our work in the privacy and security space.
- Led a team on identifying and collecting information needed to scale our experiment up to 100,000 fake identities. Coordinated with technical team, and contributed to overarching design of this large-scale project.
- Spearheaded Literature Review, and designed protocols for interacting with the Dark Web.
- Helped create a framework to validate privacy policies, and then reviewed them.

The Speech Lab | *Student Researcher* August 2020 – June 2022

- Coded Linguistics Experiment through Gorilla and Javascript.
- Spearheaded Literature Review, and presented work at Virginia Tech's Research symposium.
- Prepared data for analysis, and presented literature reviews.

Data in Our Lives | *Teaching Assistant* August 2023 – December 2023

- Assumed responsibilities in absence of Graduate Teaching Assistant.

Quantitative Ecological Dynamics Lab | *Student Researcher* September 2023 – Present

- Development of a coding workflow to streamline data analysis.
- Independently learned Bayesian Modeling in order to create models.
- Assisted in data digitization.

Intermediate Data Analytics and Machine Learning | *Teaching Assistant* January 2024 – May 2024

- Graded multiple large assignments in this senior level class.

Probability and Distributions | *Teaching Assistant* January 2024 – May 2024

Skills

Languages: R, Python, SQL, Dart, Javascript, Java, MPI, LaTeX, Matlab, C, SAS
Tools: Git/GitHub, Unix Shell, PostgreSQL, VS Code, RStudio, Vim, Netlify, Blender
Libraries: pandas, NumPy, Matplotlib, psycopg, ggplot2, Tidyverse, Shiny

Projects

Personal Website | *Javascript, HTML, Git, Unix Shell, VS Code, Python, R* May 2023 – July 2023

- Analyzed *100 Million* chess games, all played on lichess.org in the month of April.
- Independently learned psycopg, PostgreSQL, dbplyr, for data wrangling. ~1000 Lines of code.
- Learned web development to launch a static website, with interactive elements via Javascript and iframes.
- Solved problems related to building a medium scale application (detailed on https://joeh.netlify.com).

Desktop Program | *Flutter, Dart, Snap, Git, Unix Shell, VS Code* December 2023 – Present

- Built a visually polished application, to work across Windows, MacOS, and Linux.
- Interacted with user state, ultimately creating a novel file editor