

Dylan Pieper

Research Data Scientist

Profile

I help researchers in education and public health transform complex data into meaningful insights and decisions through evaluation, measurement validation, and quality improvement systems. I write robust analytic plans, build collection methods and pipelines that scale, develop valid and reliable measures, and deliver reports and dashboards that inform decisions and actions. Beyond technical solutions, I build organizational capacity—helping teams develop programming and writing skills to share and sustain our work together.

Personal Information

He/Him
Madison, Wisconsin
dylanpieper@gmail.com
<https://dylanpieper.github.io/>

Core Competencies

Soft Skills

Cross-functional Collaboration,
User Support & Feedback,
Technical Communication,
Interviewing,
Data Strategy &
Roadmap Planning,
Writing

Data Tools

R, Python, Quarto, Shiny,
Qualtrics, Tableau, SPSS, JASP,
Package and API Development

Infrastructure Tools

SQL (MySQL, PostgreSQL, DuckDB),
REDCap, Git, GitHub, Sentry,
Docker, Azure, Linux (RHEL)

Experience

Research Analyst - Collective for Innovation, Scholarship, and Research
in Undergraduate Medical Education (CISR-UME), School of Medicine
and Public Health, University of Wisconsin-Madison

Nov 2025 - Present

- Lead data analytics, program evaluation, and infrastructure development to support research projects and strategic unit initiatives
- Connect campus resources, data collection sources, and operational workflows to create a unified research infrastructure across project teams
- Align unit across research projects through shared data tools, process standardization, and quality improvement initiatives
- Evaluate and research medical school curricula and interventions using evidence-based practices to improve student outcomes

Data Scientist - School of Pharmacy, University of Pittsburgh,
Pittsburgh, PA

Sep 2021 - Oct 2025

- Led data strategy and technical roadmaps for grant projects with researchers, training and technical assistance specialists, healthcare providers, public officials, and IT departments
- Conducted research and evaluation for quality improvement using mixed methods, including multilevel statistical modeling, psychometrics, key informant interviews, observation, and user feedback
- Developed and deployed tools including survey applications, automated reports, dashboards, and web applications, managing the full product lifecycle
- Designed and built data integrations connecting 250+ treatment centers using REDCap, and automated ETL workflows using R and DuckDB
- Engineered and maintained SQL databases that integrate project data with entity relationships and operational and geographic data
- Promoted data tool adoption and knowledge sharing through dissemination and technical documentation, expanding reach from partners to research communities
- Contributed to training a team of 3 to 5 data staff, including recruitment, professional development, and mentorship

Experience

Field Interviewer - NORC, University of Chicago, Chippewa Falls, Wisconsin

Aug 2021 - Nov 2021

- Conducted structured interviews with research participants across diverse geographic locations, building rapport and ensuring high-quality data collection using standardized survey instruments and protocols
- Managed project coordination and logistics including scheduling, travel planning, and participant communication to ensure successful data collection across assigned geographic areas
- Maintained strict data governance and research ethics standards, ensuring confidentiality and security protocols throughout the participant interactions

Research Specialist - Michele Gelfand's Culture Lab, University of Maryland, College Park, MD

Aug 2020 - Aug 2021

- Analyzed and published data on COVID-19 deaths across 57 countries and their relationship to social norms using multilevel statistical models
- Ran two experiments testing different nudges, or message framing effects, for wearing masks and forecasted the utility of these interventions
- Developed a natural language processing (NLP) Shiny app to detect threatening language and compare levels across texts (<https://www.michelegelfand.com/threat-dictionary>)

Writing Coach - University of Northern Iowa, Cedar Falls, IA

Aug 2017 - May 2020

- Coached students in writing and statistics, providing personalized guidance based on individual needs assessment to improve academic performance across diverse learning styles
- Trained new tutors and developed training materials to ensure consistent, effective tutoring practices and knowledge transfer across the team
- Conducted outreach in classrooms and registration events to promote tutoring services and connect students with academic support resources
- Applied evidence-based frameworks including Bloom's taxonomy and Csikszentmihalyi's flow state model to optimize student learning experiences
- Supported diverse student populations including English Language Learners and students with learning disabilities, adapting approaches to meet varied accessibility needs

Education

Master of Arts - Social Psychology - University of Northern Iowa, Cedar Falls, Iowa

2018 - 2020

- Completed courses Statistical Computing I and II in R programming
- Worked as a Research Assistant in the Psychoneuroendocrinology Lab
- Worked as a Teaching Assistant in undergraduate psychology courses (Introduction to Psychology, Biopsychology, and Psychology of Gender)
- Awarded research and travel funds from the university totaling \$1,800
- Thesis: "Challenging Social Systems Under the Threat of Pollution" (<https://scholarworks.uni.edu/etd/1028/>)

Bachelor of Arts - Psychology - University of Northern Iowa, Cedar Falls, Iowa

2014 - 2018

Publications

- Gelfand, M. J., Jackson, J. C., Pan, X., Nau, D., Pieper, D., Denison, E., Dagher, M., Van Lange, P. A. M., Chiu C., & Wang, M. (2021). The relationship between cultural tightness-looseness and COVID-19 cases and deaths: A global analysis. *The Lancet: Planetary Health*. [https://doi.org/10.1016/S2542-5196\(20\)30301-6](https://doi.org/10.1016/S2542-5196(20)30301-6)
- Gelfand, M. J., Li, R., Stamkou, E., Denison, E., Fernandez, J., Choi, V., Chatmen, J., Jackson, J. C., Pieper, D., & Dimant, E. (2021). Persuading conservatives and liberals to comply with mask-wearing: An intervention tournament. *Journal of Experimental Social Psychology*. <https://doi.org/10.1016/j.jesp.2022.104299>
- Dimant, E., Clemente, E. G., Pieper, D., & Azevedo, F. (2022). Politicizing mask-wearing: Predicting the success of behavioral interventions among Republicans and Democrats in the U.S. *Scientific Reports*, 12, 7575. <https://doi.org/10.1038/s41598-022-10524-1>
- Pieper, D. (2020). Challenging social systems under the threat of pollution: Replication and extension of Eadeh and Chang (2019) [Master's Thesis, University of Northern Iowa]. UNI ScholarWorks. <https://scholarworks.uni.edu/etd/1028>

Presentations

- Pieper, D. (2025, September). From messy to meaningful data: LLM-powered classification in R. *posit::conf*. <https://github.com/dylanpieper/posit-25>
- Pieper, D. (2025, June). redquack: An R package for memory efficient REDCap-to-DuckDB workflows. *R/Medicine*. <https://r-consortium.org/posts/redquack-an-r-package-for-memory-efficient-redcap-to-duckdb-workflows>

Presentations

- Katie, W. & Pieper, D. (2024, June). The Pennsylvania medications for opioid use disorder (PA MOUD) technical assistance and quality improvement expansion project. *Rural Health Information Hub*. (Online resource). <https://www.ruralhealthinfo.org/project-examples/1139>
- Pieper, D., Gelfand, M. J., & Denison, E., (2021, February). COVID-19: Meta-norms to wear masks and social distance in the U.S. *Society for Personality and Social Psychology*. (Remote poster session). <https://osf.io/y8cug>
- Pieper, D., Hirano, H., & Harton, H. C. (2020, April). The effect of environmental threats and terrorism/violent-crime threats on political orientation and attitudes. *Midwestern Psychological Association Conference*. Chicago, Illinois. (Conference canceled) ... Also (2020) at the *University of Northern Iowa's College of Social and Behavioral Sciences Conference*. Cedar Falls, Iowa. (Conference canceled). <https://osf.io/3n7r8>
- Pieper, D. (2020, February). Challenging the system under the threat of pollution: Low system justification mediates a liberal political shift. *Society for Personality and Social Psychology*. New Orleans, LA. (Poster session) ... Also (2020) at the *University of Northern Iowa's College of Social and Behavioral Sciences Conference*. Cedar Falls, Iowa. (Conference canceled). <https://osf.io/v7nez>
- Pieper, D. (2019, April). What's in a name? Measuring the potential influence of medical cannabis labels on attitudes toward its use. *Iowa Psychological Association Conference*, Des Moines, Iowa. (Poster session) ... Also (2019, April) at the *University of Northern Iowa's College of Social and Behavioral Sciences (CSBS) Conference*. Cedar Falls, Iowa. Awarded Best Oral Presentation (2nd place, \$250). <https://scholarworks.uni.edu/agss/2019/all/18>
- Pieper, D., DeSoto, C., & Hitlan, R. (2018, April). The relations between personality and source of dietary protein. *Midwestern Psychological Association Conference*. Chicago, Illinois. (Poster session) ... Also (2017, April) at the *University of Northern Iowa's College of Social and Behavioral Sciences Conference*. Cedar Falls, Iowa.

R Packages

- redquack: Transfer REDCap data to a database and use in R without exceeding available memory (<https://dylanpieper.github.io/redquack>)
- shinysurveyjs: Deploy SurveyJS survey applications using R Shiny (<https://github.com/dylanpieper/shinysurveyjs>)