

# Dylan Pieper

## Research Data Scientist

### Profile

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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 extend our work together.

### Personal Information

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

### Core Competencies

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#### 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

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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

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### 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

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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

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- 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

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- 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

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- 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

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- 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>)