HELEN WANG

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EDUCATION

Georgetown University McCourt School of Public Policy   Washington, D.C.
Master of Science in Data Science for Public Policy   *Expected May 2026*

Princeton University   Princeton, NJ
Bachelor of Arts in Psychology, Certificate in Cognitive Science   *May 2022*

TECHNICAL SKILLS

Data Science: Machine Learning/NLP/AI, Statistical analysis, Cloud (GCP, AWS, Snowflake)
Tools: Tableau, Shiny, Datawrapper, Qualtrics/Survey Design, Web scraping/APIs
Programming: Python (pandas, scikit-learn), R (tidyverse, quanteda), SQL, Git/GitHub

DATA SCIENCE PROJECTS

Predicting NYPD Misconduct Case Outcomes and Penalties   *May 2025*
- Built supervised classification models to predict case and penalty outcomes for police misconduct cases with SMOTE, hyperparameter tuning, and model selection, along with NYT API-scraped media data to assess the impact of public visibility

Structural Topic Modeling of DEI Legislation   *December 2025*
- Applied structural topic modeling to 15 years of scraped diversity, equity, and inclusion U.S. legislation data and used community detection algorithms to map cosponsorship networks; built an interactive Shiny dashboard to enable data exploration

Examining SHSAT Sentiments   *December 2025*
- Conducted diachronic semantic analysis using word embeddings to evaluate NYC news coverage of the SHSAT pre- and post- 2018 across articles scraped from 10 different news outlets; applied stance detection using off-the-shelf classifiers along with manual validation using human coders

APPLIED DATA SCIENCE & RESEARCH EXPERIENCE

Georgetown University, Brodnax Lab   Washington, D.C.
Graduate Research Assistant   *Sept 2025-Present*
- Scrapped 10,000+ K-12 student handbooks and developed data processing and quality control scripts for a research project studying the prevalence of carceral language in the U.S. school system and its implications on the school-to-prison pipeline
- Produced 12+ data visualizations using R for an academic publication analyzing variations in carceral language in U.S. school handbooks by demographics, grade level, and institution type

Vera Institute of Justice, The Incarceration and Inequality Project   Brooklyn, NY
Research Analyst   *June 2025-Present*
- Redesigned statistical methodology and produced visualizations for a national research brief on incarceration-inclusive unemployment metrics, highlighting how incarceration hides increasing racial disparities in unemployment

- Produced a data story on the effects of partner incarceration on mothers' labor market outcomes using mixed methods, combining descriptive statistics and qualitative analysis of 6 semi-structured interviews
- Leveraged time series cluster analysis to explore gentrification and displacement patterns and its effect on incarceration across 64 urban counties

Credence Management Solutions, Health   McLean, VA
Policy Analyst   *August 2024-May 2025*
- Synthesized scientific literature and market research on competitors to develop evidence-based recommendations and solutions for 3 NIH grant bids, including strategies for nationwide scaling, implementation, recruitment, program evaluation, and data sourcing
- Leveraged natural language processing on 17,000+ congressional legislation and geospatial visualization of federal health funding to identify emerging health policy priorities of federal stakeholders, informing strategic engagement
- Examined 13,000+ NIH-funded research projects to estimate research trends and compute prevalence rates to inform strategic business recommendations

National Institutes of Health, Social Networks Methods Section   Bethesda, MD
Postbaccalaureate Research Fellow   *June 2022-July 2024*
- Managed, cleaned, and analyzed complex longitudinal and cross-sectional survey, social network, and semi-structured interview data (500+ participants), building data pipelines and quality control scripts to process numeric data and redact PII from interview transcripts
- Applied hierarchical modeling, social network analysis, thematic analysis, and cluster algorithms across 14+ quantitative and mixed-methods research projects, examining the impacts of interpersonal networks and institutional structures on caregiver well-being
- Developed data pipelines and quality control measures for a community education program focused on reducing disease outcomes via a genetic literacy intervention in under-resourced communities
- Led research project examining how social network characteristics influence caregiving coping strategies and wellbeing, identifying nonfeasance (lack of support) as the principal driver behind maladaptive drinking behaviors; earned the Outstanding Poster Award for effective research dissemination
- Supported recruitment, data collection and questionnaire development in Qualtrics, resulting in the net enrollment of 100+ participants in a longitudinal network study on caregiving and its related physical and mental health outcomes

Princeton University, Niv Lab   Princeton, NJ
Undergraduate Researcher   *Sept 2021 – May 2022*
- Independently secured $3,500 research grant to fund senior thesis project exploring social learning in individuals with Complex Posttraumatic Stress Disorder (CPTSD) symptomology
- Designed, managed, and executed a behavioral experiment to assess abnormalities in moral inferencing in 100+ participants, including pre-screening, task development, data collection, quantitative data analysis, and manuscript writing

Princeton University, Adversity and Relationships in Context Lab   Princeton, NJ

Undergraduate Research Assistant   *Sept 2021 – May 2022*

- Conducted data processing and qualitative analysis of 20+ semi-structured interviews, including audio transcription and thematic analysis, to evaluate the effects of social class on close relationship reformation in college students
- Optimized data standardization processes by developing protocols and documentation for cleaning and preparing interview transcripts

Alzheimer Hellas   Thessaloniki, Greece

Summer Intern (Remote)   *June 2021 – Aug 2021*

- Synthesized literature on the effects of COVID-19 on the mental wellbeing of dementia caregivers in Greece, culminating in co-authorship on an academic publication

Princeton University, Behavior Science for Policy Lab   Princeton, NJ

Undergraduate Research Assistant   *Sept 2019 – May 2021*

- Systematically reviewed and coded 3000+ research papers for two meta-analysis projects assessing (1) laboratory behavioral measures as predictors of environmental field behavior and (2) field applications of the Domain-Specific Risk-Taking (DOSPERT) scale
- Built longitudinal datasets tracking ESG metrics such as corporate coalition membership, activist activity, and sustainability scores by compiling information from bank disclosures and news reports
- Utilized R and Java to streamline literature searches, perform exploratory data analysis, and produce data visualizations to capture longitudinal changes in various environmental policy measures
- Created and pilot-tested surveys in Qualtrics and prepared manuscripts for publication using LaTeX

Princeton University, Witten Lab   Princeton, NJ

Undergraduate Research Assistant   *Sept 2018 – May 2019*

- Manually coded 10,0000+ video frames of mouse behavior in MATLAB for a study analyzing the effect of ventral tegmental area inhibition via optogenetics on fear extinction in mice
- Mapped and recorded neuron activation in mice brain slices via WHOLEBRAIN software in R

PUBLICATIONS & PRESENTATIONS

Peer-Reviewed Publications

Nikolaidou, E., Tsatali, M., Eleftheriou, M., **Wang, H.**, Karagiozi, K., Margaritidou, P., & Tsolaki, M. (2022). Emotional Function, Negative Thoughts about the Pandemic, and Adaptability Skills among Dementia Caregivers during the COVID-19 Pandemic. *Brain Sciences*, 12(4), 459. https://doi.org/10.3390/brainsci12040459

Zajdel, M., **Wang, H.**, Swan, T., Keller, K., Lin, J., Koehly, L.M. (2025). The role of marriage and partnership in caregiving: Links to the hypothalamic-pituitary-adrenal axis. *Couple and Family Psychology: Research and Practice,* 14(4), 294. https://doi.org/10.1037/cfp0000285

Manuscripts in Preparation

Keller, K., **Wang, H.**, Mountcastle, L., Zajdel, M., Koehly, L.M. Post-traumatic Stress in Rare Disease Caregiving: A Mixed-Methods Analysis

PRESENTATIONS

Fisher, M., **Wang, H.**, Brookes, J., Koehly, L.M. (2024, October). Communication of Disease Risk, Resilience, and Generational Status among Families Affected by Sickle Cell Disease. Poster to be presented at the American Public Health Association 2024 Annual Meeting, Minneapolis, MN.

Bishop, R., **Wang, H.**, Lin, J., Koehly, L. M. (2024, April). Social Support and Health Behaviors Among Mexican Americans in Texas: The Role of Social Ties. Poster presented at the American Academy of Health Behavior 2024 Scientific Meeting, Savannah, GA.

Wang, H., Cooper, P., Nummelin, J., Koehly, L.M. (2023, November). Gender Differences in Division of Labor and Network Utilization in Rare Disease Caregivers. Poster presented at the National Human Genome Research Institute Symposium, Bethesda, MD.

Wilson, K., **Wang, H.**, Cordova Amador, I., Koehly, L.M, Lin, J. (2023, November). Medical Mistrust and Social Network Correlates in Hispanic Populations and their Impact on Rheumatoid Arthritis Symptomology. Poster presented at the Gerontological Society of America conference, Tampa, FL.

Cordova Amador, I., Mukhi, P., **Wang, H.**, Wilkinson, A.V., Lin, J., Koehly, L.M. (2023, November). The Effect of Hurricane Ike on Sharing Family Health History Amongst Mexican American Families. Poster presented at the National Human Genome Research Institute Symposium, Bethesda, MD.

Koehly, L.M., **Wang, H.**, Lin, J., Hollstein, B., Mooseder, A., Pfeffer, J., Prochnow, T., Shafie, T. (2023, June). Characterizing malfeasance, nonfeasance, and uplift relationships within interconnected convoys of parents for children with rare disease. Presentation given at Sunbelt: International Network for Social Network Analysis, Portland, OR.

Wang, H., Zajdel, M., Wilson, K., Mukhi, P., Koehly, L.M. (2023, April). Linking "Drinking to Cope" with Social Network Properties and Caregiving Context. Poster presented at the National Institutes of Health Postbac Poster Day, Bethesda, MD. Awarded the Outstanding Poster Award.

Wilson, K., Zajdel, M., **Wang, H.**, Koehly, L.M. (2023, April). Service Utilization Barriers and Linked Health Outcomes for Caregivers of Children with Inborn Errors of Metabolism. Poster presented at National Institutes of Health Postbac Poster Day, Bethesda, MD.

Keller, K., **Wang, H.**, Mountcastle, L., Zajdel, M., Koehly, L.M. (2023, April). Posttraumatic Stress in caregivers of children with rare diseases: a multi-method analysis. Poster presented at National Institutes of Health Postbac Poster Day, Bethesda, MD.

Wang, H., Zajdel, M., Koehly, L.M. (2022, November). Linking "Drinking to Cope" with Network Properties and Caregiving Context. Poster presented at the National Human Genome Research Institute Symposium, Bethesda, MD.

Wilson, K.L, Waldman, Z.C., **Wang, H.**, Lin, J., Koehly, L.M. (2022, November). Participant Engagement with genomic risk information and community health services. Poster presented at the National Human Genome Research Institute Symposium, Bethesda, MD.

Wang, H., Cooper, P., Nummelin, J., Zajdel, M., Koehly, L.M. (2022, August). Gender Roles and Informal Caregiving: A Social Network Approach. Poster presented at National Institutes of Health Summer Research Day, Bethesda, MD.

Wang, H. (2022, May). Moral Inferencing Patterns within Complex Post-traumatic Stress Disorder (CPTSD) Populations. Presentation given at Princeton University's Department of Psychology, Princeton, NJ.

AWARDS & FELLOWSHIPS

2023 **Outstanding Poster Award**, National Institutes of Health, in recognition for authoring posters that scored in the top 20% of posters presented

2022 **Howard Crosby Warren Senior Prize in Psychology**, Princeton University, in recognition of scholarly attainment and good character

2021-2023 **National Institutes of Health Undergraduate Scholarship Program**

1 of 15 chosen nationally to receive scholarship (up to $20,000), including a paid summer research internship and funded post-graduation employment at the NIH; awarded to students from disadvantaged backgrounds to develop careers in biomedical and behavioral social science health-related research

2021-2022 **Undergraduate Senior Thesis Research Grant** ($3,500), Princeton University, awarded to support data collection and analysis for senior thesis research

2018-2022 **QuestBridge National College Match Scholar**

Received competitive full, 4-year scholarship (worth over $200,000) to attend QuestBridge College Partner, Princeton University; awarded to low-income, high-achieving high school seniors from disadvantaged backgrounds

EXTRACURRICULAR & VOLUNTEER EXPERIENCE

Georgetown Public Policy Review Data Visualization Team   Washington, D.C.
Senior Editor   *Sept 2024 – Present*
- Partnered one-on-one with Georgetown student authors to develop data visualizations for publications via Tableau and R, while delivering feedback on narrative clarity, cohesion, and communication effectiveness

NIH UGSP Resource Committee   Bethesda, MD
Committee Chair   *Sept 2022 – May 2023*
- Curated resources on graduate school applications, career development, and educational opportunities for low-income and disadvantaged applicants

RealTalkPrinceton   Princeton, NJ
Treasurer & Student Contributor   *Sept 2020 – May 2022*

- Advised students and prospective applicants on campus community events, academics, extracurriculars, culture, and personal matters
- Developed a standardized protocol to streamline organizational response to student mental health crisis posts, ensuring timely and appropriate responses
- Co-led the registration process to ensure official recognition as an Office of the Dean of Undergraduate Students (ODUS) group

Princeton Peer Nightline   Princeton, NJ
Crisis Counselor   *Sept 2019 – May 2022*
- Respond to over 160+ hours of crisis calls and online chats from the Princeton University Undergraduate and Graduate Student body, providing peer counseling, suicide risk assessment, and mental health support

***figments* magazine**   Princeton, NJ
Staff Editor   *Sept 2019 – May 2021*
- Assisted with the production of Princeton University's bi-annual science fiction, fantasy, horror, and speculative fiction/poetry publication
- Worked 1-on-1 with selected student authors to refine manuscripts for publication. providing feedback on content and prose

CONTACT Princeton   Princeton, NJ
Project Leader & Crisis Counselor   *Sept 2018 – May 2022*
- Supervised and maintained records of 100+ student volunteers at CONTACT Princeton, including managing recruitment, overseeing training, assigning apprenticeships, facilitating collaborations, and monitoring crisis shift activity
- Represented organizational interests at Executive Board meetings and other communications while also maintained relationships with key stakeholders, including partner branches, sponsoring organizations, daughter organizations, and University oversight members
- Facilitated the transition from in-person to virtual training during COVID-19, ensuring the continued training and support of volunteers while prioritizing participant safety
- Respond to over 120+ hours of crisis text chats and phone calls from the CONTACT Crisis line, the National Suicide Prevention Lifeline, and CrisisChat, following certification in Mental Health First Aid and 10 weeks of intensive training on crisis intervention, suicide risk assessment, active listening, and safety planning

MISCELLANOUS WORK EXPERIENCE

Princeton University Public Safety Department   Princeton, NJ
University Operator Line   *Sept 2021 – May 2022*
- Directed and transferred callers across different University Departments as needed and answer inquiries about campus events and policies

CONTACT of Mercer County   Pennington, NJ
Summer Intern (Remote)   *June 2020 – Aug 2020*
- Created and implemented a virtual training program to enhance crisis intervention education during COVID-19, leveraging interviews, simulated calls, and video editing

- Compiled a referral database of national organizations and local resources for crisis counselors, streamlining access to information and resources

Princeton Public Library   Princeton, NJ
Academic Tutor   *Sept 2019 – May 2020*
- Provided free tutoring for K-12 students on a wide range of subjects, including Math, English, Science, and Social Studies

Mega Academy   Flushing, NY
Teaching Assistant   *June 2019 – Aug 2019*
- Tutored 53 high school students in SAT-level Math and English and provided support in classroom settings by grading assignments and maintaining detailed progress records.
- Proctored and evaluated practice SAT exams, providing feedback to support student performance improvement.

Alliance Computing Solutions   Princeton, NJ
Summer Intern   *June 2019 – Aug 2019*
- Assisted with basic filing and data entry, including the maintenance of detailed inventory records, billings, vouchers, and contracts with both customers and the Department of Labor
- Maintained communications with both English and Chinese-speaking clients on office photo lines and through email for both the Training and Testing Departments
- Registered test-takers and acted as proctor for exams such as CELPIP, Pearson Vue, PSI, MAT, CLEP, Accuplacer, etc.