ALLISON M. TOWEY

https://github.com/atowey-uchi | https://www.allisontowey.com

EDUCATION

The University of Chicago*, 2023*
Master of Arts in Computational Social Science*, GPA: 4.00/4.00*

The University of Notre Dame, 2019
Bachelor of Arts in Political Science*, magna cum laude* and *Phi Beta Kappa,* GPA: 3.91/4.00

PROFICIENCIES & COURSEWORK

- *Technical Proficiencies:* Python, R, Stata, SQL, AWS, SciKit-Learn, TensorFlow, SpaCy, CausalML, Spark/PySpark, Snowflake, QGIS/ArcGIS, GeoDa, HTML/CSS, Vue.JS, Github, JavaScript, D3.JS
- *Coursework*: Advanced Computer Science, Machine Learning, High Performance Computing, Network Analysis, Data Visualization, Causal Inference,, Spatial Data Science, Natural Language Processing (NLP)

RELEVANT EXPERIENCE

Data Scientist & Presidential Management Fellow

United States Agency for International Development | *2024 – Present*
- Conducts strategic information analyses within the Office of HIV/AIDS, triangulating structured and unstructured data to enhance decision-making and implement anomaly detection for PEPFAR performance monitoring, as part of the Artificial Intelligence/Data Science (AI/DS) Working Group.
- Leads the development of automated workflows for data extraction and analysis, creating a custom API that integrates web scraping, data processing, and interactive tools for routine use by technical and non-technical staff.

National Oceanic and Atmospheric Administration | *2023 – 2024*
- Developed innovative data models and natural language processing solutions for hiring and employee survey data using Python, optimizing HR operations and improving talent acquisition and employee retention.
- Designed, built, and maintained four widely-used Tableau dashboards, monitoring employee attrition, diversity, and workforce metrics by combining SQL queries and advanced interactive visualizations.

Data Science Intern

Warner Bros Discovery | *2022*
- Performed data manipulation and employed machine learning approaches (Random Forest, xgBoost) to model viewership trends of 3000+ HBO Max programs, using SQL in a cloud-based environment.
- Analyzed ticket sales and attendance trends for theatrical shows, creating visualizations in GGPlot, R-Shiny, and D3.js, and communicated insights to leadership to inform decisions on extending Broadway show runs.

Teaching Assistant

University of Chicago | *2022 – 2023*
- Led lab sessions, provided tutoring, and supported instructors in teaching and grading for core technical courses, including Computer Science I & II and Big Data & High Performance Computing.
- Covered topics such as Python basics, recursion, data visualization, relational databases, web-scraping, and cloud computing (AWS, Spark/PySpark, API development).

Policy Analyst, Legislative Data

Curriculum Associates | *2020 – 2022 (full-time), 2023 – 2024 (contractor)*
- Conducted research on state educational legislation and political landscapes in all 50 states, presenting findings to regional vice presidents and senior leadership.
- Drafted queries to analyze legislative data and its impact on school districts, aligning insights with company priorities.

Associate Product Manager

Curriculum Associates | *2019 – 2020*
- Led the development and release of digital accessibility features (keyboard navigation, screen reader support, closed captioning), managing software engineering priorities and communicating progress to stakeholders.

TECHNICAL PROJECTS & RESEARCH

Data Visualization: Alcohol and Ukrainian Women's Experiences of Intimate Partner Violence, 2023 link
- Analyzed and visualized data from the 2007 Demographic and Health Survey in Ukraine to understand the relationship between frequency of alcohol consumption and women's experiences of intimate partner violence.

Women in Politics and Misogynistic Twitter Mentions, 2022 link
- Led a team to classify tweets as targeted at female politicians by scraping over 400,000 tweets tagging women in US Congress and Senate in the week leading up to the 2020 election and using a BERT Topic Modeling process.