

Michael Willen

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EDUCATION

Yale University

New Haven, CT

Bachelor of Arts with Distinction in Statistics and Data Science; GPA: 3.54

Aug. 2022 – May 2026

- **Coursework:** Data Analysis, Algorithms, Data Structures, Campaign Data Science, Urban Design, Multivariate Statistics, Network Analysis, Linear Models, Advanced GIS, Machine Learning, Urban Spatial Analytics
- **Other Activities:** Yale Daily News (Head Copy Editor), Yale Danceworks (Business Manager and Production Manager), Alliance for Dance at Yale (Treasurer), Jonathan Edwards College Council, Sound Design/Engineering

EXPERIENCE

Massachusetts Department of Conservation and Recreation

Remote

GIS Intern

Jun. 2026 – Present

- Using ArcPy to automate climate vulnerability analysis of over 450,000 acres of properties, creating an organized and flexible data pipeline that can adapt to future adjustments and help direct resources and planning efforts.

Metropolitan Transportation Authority

New York, NY

Data Science Intern, Emerging Talent Program

Jun. 2025 – Aug. 2025

- Developed scalable, automated data pipelines to ingest millions of rows of data into a centralized data lake, making it easier for analysts across the MTA to work with data previously spread across disjoint databases.
- Cleaned unusable location data for over 900,000 bus incidents and created maps that uncovered patterns in bus incidents, which reached the head of buses and provided the base for efforts that continued in the fall.
- Transformed raw data into cleaned, comprehensive tables to meet the needs of cross-departmental teams.

Yale Center for Geospatial Solutions

New Haven, CT

Student Lab and Research Associate

Jan. 2025 – Jun. 2025

- Conducted remote sensing analysis of carbon abundance and vegetation health.
- Analyzed satellite images using spectral indices and ArcGIS geoprocessing tools.

NYU Center for Urban Science and Progress

New York, NY

Undergraduate Research Assistant

Jun. 2024 – Aug. 2024

- Surveyed accessibility in 85 of New York's non-ADA-compliant subway stations, evaluating 308 unique entrances.
- Designed a survey tool to document over 40 relevant variables on the path from street to platform.
- Minimized subjectivity in the questions and streamlined the tool to reduce the data collection time.
- Built a novel dataset, with a paper recently submitted for publication in the Journal of Public Transportation.

Student Technology Collaborative at Yale

New Haven, CT

Cluster Technician Coordinator

Oct. 2022 – Present

- Oversee a team of over 75 cluster technicians, who support and maintain cluster computers and printers at Yale.
- Identify, delegate, and address problems proactively, handle support tickets, liaise with clients and repair teams.
- Redesigned the training slide deck to better suit the needs of new cluster technicians.

CERTIFICATIONS/COURSES

- **Kaggle Learn:** Geospatial Analysis, Intermediate Machine Learning, Advanced SQL, Data Visualization, Pandas
- **Esri (ArcGIS):** Spatial Data Science

AWARDS

- **Eagle Scout, Boy Scouts of America:** Earned in June 2022. Orchestrated construction of birdhouses for a local park. Led scout troop for six months as Senior Patrol Leader, and planned and ran weekly meetings and events.
- **Dwight Hall Summer Fellow:** Earned in June 2024. Grant awarded to students dedicating their summers to creating social change. Awarded for work documenting the barriers to transit use in the New York City subway system.
- **USA Coding Olympiad, Silver Division:** Earned in January 2021. Virtual algorithmic problem-solving coding competition; self-taught C++ to improve performance in the event.

SKILLS

- **Tools:** ArcGIS Pro, AGOL, ModelBuilder, Jupyter, Apache Airflow, VS Code, Microsoft Office, Google Suite
- **Languages:** Python, SQL, R, C++, C, HTML, CSS
- **Packages:** ArcPy, PySpark, Pandas, GeoPandas, Seaborn, Plotly, NumPy, Matplotlib, OSMnx, Folium, NetworkX