

CLAIRE BOYD

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EDUCATION

The University of Chicago

Master of Science in Computational Analysis and Public Policy

Chicago, IL

Expected June 2024

Relevant Coursework: Machine Learning, Big Data Application Architecture, Time Series Analysis, Cloud Computing, Causal Inference

The University of North Carolina at Chapel Hill

Chapel Hill, NC

Bachelor of Arts in Political Science and Global Studies

May 2018

Robertson Scholar: a full merit scholarship program which requires a semester in residence at Duke University.

SKILLS

Programming languages: Python, R, SQL, git, HTML (basics), CSS (basics) bash (basics), Scala (basics)
Machine learning: linear and logistic regression, decision trees, neural networks (python: pytorch, scikit-learn, R: tidymodels)
Time series forecasting: Regression, ARIMA, Exponential smoothing (python: prophet, R: ts, forecast, tseries)
Cloud computing: Apache (HDFS, Hadoop, Hive, Spark), AWS (s3, ec2, Lambda, SQS, SNS), [midway2](#) computing cluster
Analysis & visualization: Python (pandas, polars, matplotlib, plotly), R (tidyverse, ggplot3), PowerBI, Tableau Public, Excel
Management: Project Scoping, Project Management, Grant & Proposal Writing, Fundraising, Public Speaking

EXPERIENCE

Mansueto Institute for Urban Innovation

Chicago, IL

Research Engineer, Urban Research Corps

October 2023 – Present

- Make ongoing faculty-led research projects more replicable, by automating data pipelines for modeling the impacts of economic development at the neighborhood level, with a creative use of open-source software packages in Python and R (e.g. r5py/r5r)
- Deploy big data techniques to ingest, clean, and analyze national property assessment data to create city and county-specific profiles, explaining how the locality is performing in terms of vertical and horizontal equity for property taxes

New York City Mayor's Office of Technology and Innovation

New York, NY

Data Science Intern, Office of Data Analytics

June 2023 – September 2023

- Used time series modeling of 750K relevant 311 requests to predict the volume of weekly rat activity for every NYC neighborhood, with an average MAPE of 5.6%, which currently feeds into a live PowerBI dashboard which informs targeted rat mitigation efforts
- Built a learning agenda for a cross functional group of data practitioners from 12 different city departments to align demographic data standards, successfully easing inter-agency data sharing

Cook County Assessor's Office

Chicago, IL

Data Science Intern, Data Department

March 2023 – June 2023

- Developed and integrated a new feature, the "comparable finder," which uses tree traversal to identify the most similar Cook County properties to any of Cook County's 2.3M residential properties, now a key tool in evaluating models before finalization
- Enhanced functionality of Cook County Assessor's Office R package [lightsnip](#) by adding the above feature, aiding in formal documentation and development of the feature for public use

Urban Institute

Washington, DC

Research Associate, Office of Race and Equity Research

November 2021 - July 2022


- Served as a co-principal investigator and project manager across 5 projects (budget sum: \$430,000), partnering with senior researchers to identify research questions, develop cohesive methodologies, conduct analyses, and present findings to clients
- Conducted comprehensive data analysis in R using sophisticated matching methods to link administrative federal data to publicly available census estimates for racial equity analysis. These analyses are referenced in public [Equity Action Plans](#)

Research Analyst, Center on Nonprofits and Philanthropy

August 2018 - November 2021

- Streamlined quantitative (R) and qualitative (NVivo) data analyses on nonprofit-specific data for 6 philanthropic and federal program evaluations, making comprehensive, concise visuals to explain complex results
- Led sample development, data cleaning, analysis and report writing for Salesforce.org's 3rd annual [Global Nonprofit Trends survey](#) (of over 1,600 responses) while navigating technical restraints due to General Data Protection Regulation compliance

PROJECTS

available on 

- [311 Requests in Chicago](#) (December 2023): Created a simple web app which gives users a summary of the types of 311 requests in their Chicago neighborhood, built with Lambda Architecture principles using Apache's tech stack *[public code]*
- [Predicting Pneumonia using Chest X-Ray Images](#) (May 2023): Used LeNet and Logistic Regression to predict pneumonia using chest X-Ray images with 99.4% recall accuracy, after implementing different image transformations in pytorch *[public code]*
- [COVID-19 Online: How people interacted with government websites during the pandemic](#) (March 2023): Created a complete data pipeline (from collection to visualization) to explore web traffic to COVID-related HHS websites during the pandemic *[public code]*

CIVIC ENGAGEMENT

Data, Ethics & Policy

Founding Board Member & Fundraising Chair, Harris Student Organization

April 2023 - Present

- Fundraised \$19,500 and project managed a [October 13th, 2023 conference](#) exploring topics such as: regulation of AI at the local-level, public sector partnerships, and data activism. The event brought in 12 high-profile speakers from across the country and engaged with 130 unique attendees, 32% of which were from the larger Chicago community (non-UChicago).