

# Harrison Cho

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in harrison  hcho1111

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## EDUCATION

- **Brown University** Providence, Rhode Island  
*ScM in Data Science - GPA: 4.00* September 2021 – Present
  - Relevant Coursework: Machine Learning Pipelines, Applied Mathematics for Machine Learning, Deep Learning
- **University of North Carolina - Chapel Hill** Chapel Hill, North Carolina  
*BS: Economics, Minor: Statistics, Highest Distinction and Honors - GPA: 3.88* August 2016 – December 2020
  - Relevant Coursework: Data Analysis Methods, Optimization, Advanced Econometrics, Linear Algebra, Calculus Series
  - Accolades: Phi Beta Kappa, Phillips Ambassador Scholar, Kakehashi Project Representative
  - Thesis: *The Effects of Socioeconomic Characteristics on Ambient Air Pollution and the Decision to Over Pollute*

## SKILLS

- **Languages:** Python (scikit-learn, pandas, TensorFlow, Dask), R (caret, kernlab, shiny), Julia
- **Tools/Technologies:** SQL (PostgreSQL & MySQL), PySpark, Neo4J
- **Other Languages:** STATA, Excel, Mathematica,  $\LaTeX$
- **In Progress:** NLP in python, web scraping in python, GraphQL, MongoDB, Kafka

## RELEVANT EXPERIENCE

- **Watson Institute for International and Public Affairs** Providence, RI  
*Data Science Research Assistant* January 2022 - Present
  - Refining data provenance techniques to engineer additional spatial and socioeconomic features related to fatal police encounters in the US
  - Engineering a python script to scrape census block group data from the Census Bureau's ACS-5 API given a victim's residency data
- **University of North Carolina - Chapel Hill Economics Department** Chapel Hill, NC  
*Research Assistant* December 2020 - April 2021
  - Researched Monte Carlo simulation, supervised learning techniques, and casual inference conditions in econometric machine learning models to assist literature review efforts
  - Implemented three machine learning models in scikit-learn and a sequential model in TensorFlow to simulate causal inference techniques for supermarket sales data
- **Jet Aviation Business Jets** Hong Kong  
*Operations Intern* June 2018 - August 2018
  - Authored a process manual outlining unique value streams and risk mitigation protocols in daily operations to accommodate a transitioning senior management team
  - Established client-facing interaction protocols to improve retention of high net worth accounts while maintaining critical quality and safety standards for private pilots

## PROJECTS

- **Spatiotemporal Approaches for Classifying Parking Violations** Fall 2021  
*Python: scikit-learn, Requests, Plotly; API: NYC Geoclient*
  - Developed a complete, reproducible ML pipeline via scikit-Learn for classifying 100 unique parking violation categories designated by NYC's Department of Finance. Coupled preexisting geolocation features and NYC's official Geoclient API to engineer granular coordinate data
- **NLP Classification for Dark Web Narcotics Listings** Fall 2020  
*R: quanteda, caret, dplyr, ggplot2*
  - Employed natural language processing techniques to classify clandestine product listings on pre-scraped dark web marketplace data. Researched deep learning techniques to construct a feed-forward neural network, achieving an accuracy score 37% above a standard machine learning model baseline