Harrison Cho

harrison_cho@brown.edu

harrison hcho1111

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, PySpark, TensorFlow, Dask), R (caret, kernlab, shiny), SQL (PostgreSQL & MySQL) Julia
- **Other Tools:** 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 preprocessing techniques to feature engineer additional spatial and socioeconomic variables related to fatal police encounters in the US
  - Engineering python scripts to web scrape geographic data from the Census Bureau's ACS-5 API given a victim's residency data and fatality location
- **University of North Carolina - Chapel Hill Economics Department** — Chapel Hill, NC
  Research Assistant — *December 2020 - April 2021*
  - Consolidated literature relating to Monte Carlo simulation, supervised learning techniques, and casual inference conditions in econometric machine learning models to further case study analysis 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