Harlan Hutton

M.S. in Data Science Student
Guest Researcher at Flatiron Institute

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PROFILE

Student with a passion for machine learning well-prepared for strategic and collaborative problem solving with a liberal arts skillset of efficient communication, quick adaptation, and attention to detail. Able to think creatively and playfully.

EDUCATION

New York University - M.S. in Data Science, expected May 2022
Relevant coursework: Deep Learning, Natural Language Processing, Machine Learning & Computational Statistics, Big Data, Text as Data, Probability & Statistics for Data Science, Programming for Data Science. Member of Women in Data Science.

Rhodes College – B.A. Cum Laude in Business, minor in Mathematics, May 2020
Recipient of the John M. Planchon Award for Excellence in Business, awarded to most outstanding graduating business major chosen by business faculty. Focus in finance. Graduated with 3.81 cumulative GPA, 4.00 major GPA, and 3.80 minor GPA.

EXPERIENCE

Data Science Intern, Q2 Software – Summer 2021
Member of data science team at PrecisionLender, a Q2 software company that automates negotiation solutions for banks. Pioneered a client-level recommender system using primarily PySpark that suggests the "next best" product the client should recommend to each of its relationships. Once in production, the model will allow clients to deepen relationships and increase profit through cross-selling. Pre-production work included integration testing and writing unit tests.

Fellow, Rhodes Institute for Regional Studies – Summer 2019
Independent research fellowship. Created website, www.loudwomenproject.com, documenting a self-composed timeline of Memphis music history using the stories of women who paved its way. Began process of writing biographies for each woman and linking her work to her specific page.

PROJECTS / RESEARCH

Applications of Neural Radiance Fields in Astronomy - Ongoing
Working as guest researcher with the Flatiron Institute Center for Computational Astrophysics and collaborators in DeepMind to apply neural radiance fields to unconstrained photo collections of astrophysical bodies. Early successes include reproducing authors' 3D results on simple datasets and applying 2D planar alignment to artificially-generated images of star clusters. Research is in pre-publishing stage and is ongoing.

Million Song Dataset Recommender System - May 2021
Created recommender system using PySpark's ALS method to learn latent factor representations for users and items. Final model produces top 500 songs for each user and is evaluated on mean average precision. Created comparison to a single-machine implementation using lightfm.

Predicting Restaurant Health Violations Using Yelp Reviews - December 2020
Developed classification model to predict restaurants that may violate food and safety guidelines. Created dataset using web scraper that pulled Yelp reviews and combined them with restaurant inspection data. Final model is XGBoost with hyperparameters tuned using cross-validation and a weighted F1 score of 0.856.

SKILLS

python, R, spark, pytorch, scikit-learn, matplotlib, pandas, numpy, SQL, ggplot, dplyr, git, machine learning, hadoop, data structures and algorithms, probability & statistics, business acumen, written & oral communication, problem solving