CHRIS HAYS

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EXPERIENCE

DATA ENGINEERING INTERN

Wealthfront Software, LLC

May 2019 – August 2019 Palo Alto, CA

- Designed and implemented metadata registry in the data platform to increase transparency into data source usage.
- Implemented as a REST service through the serverless application model and AWS technology stack (incl. API Gateway, Lambda and RDS). Wrote lambda function in Python, wrote SDK in Java.
- Deployed to production with potential to 1) reduce cloud storage/computation costs (5-20%) and 2) conduct trend-based monitoring to identify aberrant data usage before ETL or pipeline failures.

ANALYSIS AND MINING CONSULTANT

440 Consulting, LLC

August 2018 – March 2019 New Haven, CT

- Automated collection and cleaning of U.S. presidential polling data for 30k polls on 34 candidates and analyzed results to be used in strategic election planning for a U.S. foundation.
- Implemented in Python, using Pandas for analysis and Selenium for data collection.
- Resulting analysis can be found at: https://medium.com/@awang5/measuring-electability-c4d2b517b3a7

UNDERGRADUATE RESEARCHER

Nisheeth Vishnoi, Yale Department of Computer Science

May 2019 – Present New Haven, CT

- Conduct original theoretical computer science research on algorithmic fairness: subset selection problems, implicit bias and hiring fairness.

IMPACT FELLOW

Impact Labs

January 2019 New York, NY

- Developed minimum viable product for social good startup over the course of two-week program using React, Express.js and Node.js.
- Participated in technical classes and entrepreneurship talks on social good with cohort of fellows (∼5% acceptance rate)

TECHNICAL

C, Java, Python (pandas, pytest, tox), R (randomForest, word2vec, glove, glmnet)

AWS (EMR, S3, Lambda, RDS)

Git, LaTeX, Jupyter Notebook

Shell Scripting, Makefile

C++, Scala, JavaScript (Node.js), SQL, Julia

EDUCATION

COMPUTER SCIENCE (B.S.)

Yale University

Expected May 2020 New Haven, CT

- GPA: 4.00/4 (in major), 3.90/4 (overall)
- Coursework: Operating Systems (ongoing), Data Mining & Machine Learning, Intensive Algorithms, Systems Programming, Theory of Statistics, Probability Theory, Combinatorics and Graph Theory, Spectral Graph Theory (ongoing)

PROJECTS

METADATA REGISTRY

- See experience as data engineering intern at Wealthfront.

ESTIMATING PRESIDENTIAL CANDIDATE QUALITY

- See analysis and mining experience at 440 Consulting.

DEEP WRITING FOR COLLEGE EDITORIALS

- Scraped the Yale Daily News website for op-eds dating back 10 years, trained open-source word recurrent neural network on 5-million-word file; generated fictional think pieces using the model.
- Implemented in Python using BeautifulSoup and Pandas.

AT-RISK HOUSING INTERSECTIONS AND INDICATORS WEB APP

- Collaborated with the real estate development team to develop interactive web application displaying overlapping strategic priorities including: geographically based low-income housing tax incentives, state funding priorities, access to transit, and access to health service providers.
- Implemented in JavaScript using the Google Maps API, collected and analyzed government data using Python Pandas and Selenium.

PUBLICATIONS

- "Cover Story: God and the Left at Yale", in the Yale Daily News Magazine, link: features.yaledailynews.com/blog/2017/11/12/god-the-left-at-yale, (12 Nov. 2017).
- "Yale Men in the Cabinet", in the New Journal, link: thenewjournalatyale.com/2017/02/yale-men-cabinet, (12 Nov. 2017).