Logan Cooper

Portfolio: logan-cooper.com
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SKILLS

- **Languages**: Python, SQL, JavaScript
- **Frameworks**: Pandas, scikit-learn, Statsmodels, PyTorch, Flask, BeautifulSoup, D3.js, Node, Puppeteer.js
- **Tools**: Git, PostgreSQL, MongoDB, GLPK

EXPERIENCE

Duke University Durham, NC
Research Assistant *Feb 2022 – May 2022, Sep 2022 – Present*
- Automated the scraping and cleaning of several million broadcast news transcripts with BS4 and Puppeteer to create a dataset for NLP-based research by professors Pat Bayer and Jonathan Moreno-Medina.
- Prototyped a data pipeline to run BERT-based keyword extraction, event extraction, and sentiment analysis algorithms.

Pearson Durham, NC
Intern: Data Engineering - Predictive Analytics *May 2022 - August 2022*
- Designed and implemented a proof of concept search and recommendation engine for over 1,200 Pearson's E-textbooks using Flask, FastText, BM25, and NMSLib.
- Created Python data pipelines with BeautifulSoup, pandas, and SQL to clean and store 11.5 million text documents in Google BigQuery.
- Assisted with pitching proof of concept to CTO and senior VPs.

Federal Reserve Bank of San Francisco San Francisco, CA
Software Developer *Jul 2020 - Jul 2021*
- Created Java ETL tool to transform CSV bank data from the New York Fed into a format our data platform could ingest, allowing economists in the entire Fed system to access the data.

Forio San Francisco, CA
Software Developer *Jan 2018 - Jun 2020*
- Developed React/Redux frontends for 9 educational simulations collectively worth over $990,000 in revenue, including data visualisations and grade dashboards.
- Saved 8-16 hours of developer time per project while improving adherence to internal coding standards by creating a Node CLI tool to auto-generate project and component boilerplate.

EDUCATION

Duke University Durham, NC
M.S. Economics and Computer Science *August 2021 - May 2023 (Expected)*
Selected Coursework: Urban Economics, Computational Microeconomics, Machine Learning, Natural Language Processing, Databases

U.C. Santa Cruz Santa Cruz, CA
B.A. Global Economics (cum laude) *September 2012 - December 2016*

PROJECTS

- **PollyDarton – NLP-driven Data Curation for Polymer Nanocomposite Data Resources**: NLP-based classification of sentences in published materials science papers. Tech: Python, PyTorch, scikit-learn, NLTK, Gensim, RoBERTa
- **Obesity and Corruption in the Former USSR**: In-progress paper co-authored with Prof. Charlie Becker rigorously examining the relationship between politicians' algorithmically-estimated body mass index and corruption indicators posited by Blavatskyy in his paper "Obesity of politicians and corruption in post-Soviet countries". Uses multivariate linear regression trained on health survey data to control for confounding factors. Tech: Python, Statsmodels (Ongoing)
- **The Vocabulary of Buck 65, Quantified**: Blog post with analysis of rapper Buck 65's vocabulary inspired by Matt Daniels' Raper Vocab Chart. Tech: Python, Pandas. (May 2021)
- **Linear Regression API**: API which can perform and visualize simple OLS linear regressions. Tech: Python, Flask, JavaScript, D3.js, AWS Lambda (Aug 2020)

VOLUNTEER EXPERIENCE

Code for San Francisco San Francisco, CA
Volunteer *Mar 2020 - Nov 2020*
- Built and maintained data scrapers to automate gathering COVID case data from Bay Area public health websites.