Logan Cooper

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SKILLS

- **Languages**: Python, SQL, R, JavaScript
- **Frameworks**: Pandas, scikit-learn, numpy, scipy, PyTorch, Flask, tidyverse, React, D3.js, Node
- **Tools**: Git, Amazon Web Services (AWS), Google Cloud Platform(GCP), Tableau, Excel

EXPERIENCE

- **EBP US** — New York, NY
  Data Scientist — *July 2023 – Present*
  - Evaluated machine learning algorithms in Python (pandas, scikit-learn) for generating synthetic household vehicle preferences for use in a policy simulation project used by several East Coast states on a contract worth $130,000.
  - Utilized R and Arrow to build data cleaning and machine learning pipelines on 100+ GB datasets to analyze the economic impacts of vehicle taxation changes in California on a contract worth over $115,000.
  - Translated economic models from Excel to MySQL and integrated them into our economic impact forecasting software so they could be used for transit planning in the state of Michigan on a contract worth over $500,000.
  - Rewrote an Excel/VBA economic modelling tool in R, reducing its setup and runtime from hours to minutes while adding new features for handling data skew.

- **Duke University** — Durham, NC
  Graduate Research Assistant — *Feb 2022 – May 2022, Sep 2022 – May 2023*
  - Developed a unique research dataset utilizing Python and JavaScript scraper, amassing 80GB of broadcast news transcripts into a PostgreSQL database and identifying relevant entries with BERT-based topic modelling.

- **Pearson** — Durham, NC
  Data Science Intern — *May 2022 - Aug 2022*
  - Constructed data pipelines with Python (pandas) and SQL to download and clean 11.5 million media documents including textbooks and educational videos, transcribe audio and video with ffmpeg and Google Text-to-Speech, and store all resultant text in BigQuery.
  - Prototyped an NLP-based search and recommendation engine using spacy word2vec to create context-aware embeddings for textbook sections, deployed behind a Flask API with React frontend.

- **Federal Reserve Bank of San Francisco** — San Francisco, CA
  Software Developer — *Jul 2020 - Jul 2021*
  - Developed a custom Java ETL tool for automating data conversion and QA processes, saving an estimated 50 hours of business analyst and managerial time while eliminating manual errors.

- **Forio** — San Francisco, CA
  Software Developer — *Jan 2018 - Jun 2020*
  - Developed React/Redux frontends and Node (Express) backends for nine educational simulations, resulting in over $990,000 in revenue for clients including Harvard, MIT, and the CDC.
  - Created a internal Node CLI tool to generate project boilerplate, significantly reducing developer time per project and enhancing compliance with internal coding standards and saving approximately 80 hours of developer time per year for six years and counting.

EDUCATION

- **Duke University** — Durham, NC
  M.S. Economics and Computer Science — *2021 - 2023*
  Selected Coursework: Machine Learning, Natural Language Processing, Databases, Topics in Data Science, Mathematical Statistics

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

PROJECTS

- **Modle: The ML Guessing Game**: Game where users are shown a decision boundary generated by one of several machine learning algorithms (e.g. logistic regression, boosted decision trees, SVM, neural network) and must guess which one was used. Tech: Python, Flask, scikit-learn, pandas, TypeScript, React, PostgreSQL