

LUCY ABBOT

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Skills

PROGRAMMING LANGUAGES & LIBRARIES

Python
SQL
Pandas
NumPy
Scikit-learn
Statsmodel
Matplotlib
Seaborn
BeautifulSoup
Selenium
SpaCy
nltk

STATISTICAL METHODS & MACHINE LEARNING

Regression Modeling
Classification
Unsupervised Learning
Natural Language Processing

ENTERPRISE TOOLS

Postgres
Salesforce
Sisense
Tableau
Fivetran
Qualtrics
FormAssembly

Education

Metis Data Science Bootcamp
Sept. '20 to Current

University of Pennsylvania
June '10 to May '14
Bachelor of Arts
Criminology, Psychology
Summa Cum Laude

Employment

Braven

Director of Data & Research

May '19 to Aug. '20

- Developed product metrics in consultation with the product design and delivery teams, created data pipelines and dashboards for users to view progress against goals, and led regular meetings to discuss progress, gaps, and learnings grounded in the data. Used PostgreSQL, Salesforce, Excel, Sisense, and fivetran for dashboards and data pipelines.
- Built and maintained data collection, storage, reporting and analysis systems, supporting Braven staff to make data-driven decisions as we grew from serving 100 students per year across two sites to serving 800 students per year across four sites nationally. Conducted user interviews and focus groups to define needs and re-designed data entry systems and dashboards to meet evolving needs.
- Performed analyses to quantify Braven's impact and answer key questions about product or growth strategy, including comparison group studies to evaluate Braven's impact on students against a baseline. Conducted analyses using Excel, Python, and R. Regularly presented results and facilitated conversations around these findings among internal and external stakeholders. *In 2019, was selected as one of ten out of hundreds of global applicants to participate in the Uptake Data Fellows fellowship. For six months, worked 1:1 with a data science mentor building a logistic regression to predict which students would secure a strong job after graduation, allowing Braven to target support more strategically.*
- Hired and managed Braven's data team, including three direct reports and additional consultants. Set the strategic vision and short-term goals for Braven's data team and led the team through weekly sprints to accomplish goals.
- Initiated and managed partnerships with teams of external researchers from Harvard GSE and Stanford GSE who studied Braven's work, including collaborating on study design, coordinating data collection and sharing, providing input on analyses, and communicating results to the Braven team and external audiences. These high profile partnerships resulted in increased philanthropic revenue for Braven.
- Served as a member of Braven's leadership team as the organization grew from roughly 20 employees to 50 over four years. Contributed to key decisions around organizational strategy, and in particular helped lead the org-wide annual goal setting process. This included defining metrics and KPIs for the organization, and then tracked and reported on progress towards these goals to the Braven team and Board of Directors.

Manager, Research & Strategy

May '16 to May '19

Data Analyst

Aug. '15 to May '16

Mercer

Talent Consulting Analyst

July '14 to Aug. '15

- Assessed the competitiveness of client compensation and rewards programs to relevant labor market(s) and used these analyses to provide recommendations to clients of varying size across a variety of for-profit and not-for-profit industries
- Compiled reports summarizing purpose, methodology, detailed results of the analysis, and resulting recommendations. Presented reports to clients, including detailed reviews of methodology and analysis
- Created dynamic excel tools used by Mercer and by clients for modeling the costs and impacts of rewards programs
- Conducted research into labor trends and various client-specific industries, and summarized findings in PowerPoint decks and written reports to be used for business development opportunities and client presentations

Netter Center for Community Partnerships

Evaluation Team Quantitative Data Coordinator

- Collected and analyzed survey and achievement data from NCCP programs and k-12 student participants for in-house (formative) and external evaluation. Presented findings to program staff in order to inform programming
- Served as project manager for the NCCP-wide database implementation initiative: merged and prepared data records from over forty different programs spanning eight years for import into customized relational database, communicated with developers regarding features and bugs, presented database to NCCP staff and other stakeholders
- Played an integral role in development of customized attendance collection Android app: collaborated directly with programmers to design user interface and define attendance-count logic, downloaded data from the cloud database, created excel macros to clean it efficiently, and edited instructional documentation for app

Projects

Investigating Decades of Complaints against the NYPD

Explored a recently-released key dataset of civilian complaints against the NYPD using EDA techniques and classification algorithms. ([PDF summary of results](#) | [Github repo](#))

Exploring Reddit's Dog Communities

Used natural language processing and unsupervised learning to explore trends in topics among reddit's most popular dog subreddits. Derived "doggolino" terms from the corpus and created an app for users to explore them. ([PDF summary of results](#) | [Github repo](#))

Predicting Recipe Popularity

Scraped recipe information from the NYTCooking app and created a regression model to predict recipe popularity among users. ([PDF summary of results](#) | [Github repo](#))

Improving Twitter Accessibility with Deep Learning (in progress)

Scraped millions of image tweets to analyze current rates of alt text inclusion by users. Trained a deep learning model to generate image alt text and designed a proof of concept for integrating the model's suggestions into the image upload flow.