

# JOSEPH P. COWELL

## DATA SCIENTIST

### CONTACT

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### SKILLS

#### LANGUAGES

Python  
Git  
SQL

#### MACHINE LEARNING

Linear/Logistic Regression  
Tree-based Models  
Ensemble Models  
Model Selection  
Clustering  
Topic Modeling (NMF/LDA)

#### DATA VISUALIZATION

Tableau  
Folium  
Matplotlib  
Seaborn  
Excel/PowerPoint

#### DATABASES

PostgreSQL

#### OTHER LIBRARIES

BeautifulSoup  
NLTK  
NumPy  
Pandas  
Scikit-Learn  
Streamlit

#### CREATIVE SOFTWARE

Logic Pro  
Premiere Pro  
Photoshop  
Lightroom

### PROJECTS

#### AI-Generated Lyrics From Your Favorite Beatle

- Constructed a lyric generator by applying transfer learning to a pre-trained GPT-2 model
- Produced an online application for users with Photoshop, the Streamlit library, and Heroku
- Uncovered underlying characteristics of The Beatles through NLP, topic modeling, and sentiment analysis with the NLTK libraries

#### Visualizing Vegan Trends on Twitter

- Discovered the primary conversational topics within the vegan community with NLP and topic modeling (NMF)
- Uncovered an exponential concern for animal activism and 'fake' foods through time-based analysis and visualization with t-SNE and seaborn

#### Categorizing Fraudulent Transactions for MasterCard

- Recognized over \$200k in fraudulent card transactions through the creation and implementation of an XGBoost model based on e-commerce transaction data
- Designed an interactive web application with Streamlit to visualize metrics when varying model threshold values

#### Predicting Movie Ratings for the Creative Producer

- Engineered a linear regression model with scikit-learn to predict a movie's rating given features only available prior to its release
- Leveraged BeautifulSoup to build a dataset consisting of 4,000 movies to produce the final model
- Integrated regression coefficients to inform potential clients about the impact of their choices when producing a film

#### Non-profit Street Team Placement

- Analyzed MTA turnstile data, NYC demographics, and Covid-19 data to outline a plan for optimized street team placement with the use of pandas, numpy, matplotlib, and Folium

### EXPERIENCE

#### Metis

Data Scientist

Asbury Park, NJ  
Sept. 2020 - Dec. 2020

- Completed an immersive 12-week data science bootcamp with a focus on Python programming, data engineering, machine learning, and communication
- Solidified knowledge of the data science pipeline through the execution of five projects with an emphasis on real-world application

#### Deal Casino

Managing Member, Musician

Asbury Park, NJ  
Aug. 2013 - June 2020

- Illustrated areas of high expense with the development of smart spreadsheets in Microsoft Excel in an effort to streamline expenses and increase retention of revenue
- Optimized touring success through diligent management of lodging, financials, and band members during touring cycles that each ranged from three to six weeks in length
- Realized 9% growth in Instagram followers with a quick-to-action marketing campaign

#### Greene Tweed

Reformulation Intern

Kulpsville, PA  
June 2012 - Aug. 2012

- Coordinated with cross-functional teams within the company to design and implement an interactive internal product catalog to reduce product redundancies
- Developed and executed a test plan analyzing a root cause of a plastics manufacturing discrepancy and communicated results into the work of the manufacturing team

### EDUCATION

#### University of Pennsylvania

Bachelor of Science in Engineering in Materials Science & Engineering  
Concentration: Nanotechnology | Minor: Engineering Entrepreneurship

Sept. 2010 - May 2014