# **ALEXANDRA GARNEY**

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## **SKILLS**

PROGRAMMING LANGAUGES: R, Python, SQL

MACHINE LEARNING: Regression, Classification, Natural Language Processing, Neural Networks, Image Classification, Deep Learning

LIBRARIES/FRAMEWORKS: Pandas, NumPy, BeautifulSoup, Selenium, StreamLit, Gensim, NLTK

DATA MANAGEMENT: Git/Github, Mongo DB, DB Browser, ETL, Data Pipelines

DATA VISUALIZATION: Matplotlib, Seaborn, Tableau

**CLOUD COMPUTING:** Google Colab

## **EXPERIENCE**

#### Metis

Data Scientist · Apr. 2021 to July 2021 · Remote

Completed a 14-week licensed data science and machine learning bootcamp, which included regression, web scraping, project scoping, visualization, classification, NLP, deep learning, and data engineering. Highlighted projects include:

#### Reducing Echo Chambers Through a News Anti-Recommendation Engine

- Created an ETL pipeline with the NewsCatcher API with current news to feed into a natural language processing Word2Vec model and VADER sentiment analysis with the goal of recommending new articles from a variety of perspectives
- Leveraged StreamLit to create a publicly accessible app

#### Improving Government Form Processing Times with Handwritten Word Recognition

- 115,000 handwritten word images were explored to create a convolutional neural network in Keras to read handwriting with computing through Google Colab Pro
- The resulting model had an accuracy of 86% on unseen data

#### Philadelphia Property Taxes: Are They Fair?

- Developed a linear regression with feature engineering to understand variance in Philadelphia property's assessed tax value using Scikit-learn
- 50% of the variance in property value was explained in the final model with house sales price and neighborhood location having the largest impact on variance

#### Small Business Marketing Strategy for Maker Megan

- Created a classification model optimized for F1 score for a local business looking to increase sales through their e-commerce platform
- The resulting logistic regression model was tuned using grid search and features most impactful in predicting

### Widener University

Civic Engagement Program Manager · Sept. 2019 to Apr. 2021 · Chester, PA

- Advise 80 community service scholarship students including research-based grant proposals/advocacy campaigns/policy briefs, volunteer
  placements, and professional development
- · Lead inaugural Millennium Fellows projects centered on the U.N. Sustainable Development goals
- Design and improve training and curriculum for all campus-wide civic engagement programming series including volunteer fairs and voter registration/education

#### University of Pennsylvania

College Prép and Careérs AmeriCorps Member · July 2018 to Aug. 2019 · Philadelphia, PA

- Established and strengthened relations between employers in the West Philadelphia community and the Netter Center to increase work readiness opportunities for high school students
- Created paid internship placements for 30 high school students through grant funding
- Developed and facilitated course around creating change and youth power in the workplace

#### University of Delaware

Residence Hall Coordinator · July 2016 to July 2018 · Newark, DE

- Supervised and developed 14-16 undergraduate staff members utilizing a curriculum centered on strategies for encouraging reflection, skills for conflict management, and active listening
- Analyzed qualitative and quantitative data to evaluate student learning, staff performance, and program effectiveness. Implemented datadriven design changes to curriculum implementation
- Developed training aimed at improving experience of underrepresented students on-campus informed by research of best practices and focus groups with students

## **EDUCATION**

University of Chicago · July 2020 to Sept. 2020 Summer Program Data and Policy Scholar 2020

University of Central Florida · Aug. 2014 to May 2016 Master of Education Curriculum and Instruction 2016

Pennsylvania State University · Aug. 2010 to May 2014 Bachelor of Science Elementary Education 2014