

# EMILY NG

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## Skills

### PROGRAMMING LANGUAGES

Python  
SQL  
HTML/CSS  
Matlab

### PYTHON PACKAGES

Pandas  
Numpy  
Scipy  
SciKitLearn  
StatsModel  
BeautifulSoup  
Selenium  
Tensorflow  
Keras  
NLTK  
SpaCy  
Streamlit  
Flask

### SUPERVISED LEARNING

Linear Regression  
KNN  
Logistic Regression  
Decision Trees  
Random Forest  
XGBoost  
Naive Bayes  
Support Vector Machines  
Neural Networks

### UNSUPERVISED LEARNING

k-Means Clustering  
Hierarchical Clustering  
T-SNE  
NLP Topic Modeling  
Dimensionality Reduction

### CLOUD/DATABASES

AWS  
PostgreSQL  
MySQL  
MongoDB

### DATA VISUALIZATION

Matplotlib  
Seaborn  
Plotly  
Bokeh  
Pygal  
Tableau

### OTHER

Microsoft Suite  
Intuit Quickbooks  
Jupyter Notebooks  
Google Colab  
LaTeX  
Git/Github

## Experience

### Metis

Data Scientist

Chicago  
June 2020 to Sept. 2020

- Metis is an ACET accredited 12week immersive data science bootcamp focused on project oriented learning
- The core curriculum is centered around Python, statistics, supervised and unsupervised machine learning, exploratory data analysis, databases, and visualization techniques
- Completed five self-designed data science projects from conception to presentation; including data collection, data management, exploratory data analysis, modeling, and visualizations

### Athena Design Group

Accounting Data Assistant

Chicago, IL  
June 2017 to Dec. 2018

- Managed clerk work, organized files and completed moderate data entry
- Corrected proof material and design work
- Provided great customer service to inquiry phone calls
- Assisted with statement reconciliations and other accounting responsibilities and utilized Intuit Quickbooks software

### NCSA Gravity Group

Student Researcher at National Center for Supercomputing Applications Gravity Group

Urbana, IL  
May 2018 to Sept. 2018

- Collaborated with a team working on machine learning applications to astronomical images problem
- Used machine learning techniques to classify galaxies in images and use detection code to find galaxies in large field images

## Projects

### Clothing Style Classification (Neural Network)

- Built a neural network using Tensorflow/Keras to build a clothing style classifier, intended to identify a specific fashion styles and their usage
- Gathered images from shoplook.io to create model

### Balanced News Sentiment Recommender (Unsupervised, NLP)

- Built a recommendation system used to combat "filter bubbles" that recommends articles of competing sentiment based on the sentiment spectrum of news topics reported on a specific day
- Used Natural Language Processing skills, dimensionality reduction, and unsupervised learning hierarchical clustering methods, and NLTK VADER for sentiment analysis

### New York Times Best Sellers Book Prediction (Classification, NLP)

- Built a binary classification model to predict whether a book will become a NYT Best Sellers book before it is published, examining features such as title, author, publisher, genre, and book description.
- Gathered data from GoodReads and NYT API
- Performed Natural Language Processing to extract features from book descriptions and found common themes in book descriptions such as family and human relationships as well as suspense and danger
- Built a Streamlit app for interaction

### Social Progress Index Modeling (Regression)

- Built a Linear Regression model to explore the idea of Social Progress Index (SPI) and its comparison to Gross Domestic Product (GDP) as an indicator for a country's overall wellbeing

## Volunteering

University of Illinois Astronomical Society · Treasurer  
Urbana, IL

May 2016 to May 2019

- Maintained and kept track of club funds for the Astronomical Society at the University of Illinois, a registered student organization on campus
- Primary spokesperson for club membership relations and collected membership fees, increased total membership and membership retention
- Organized club tax documents and banking-related documents, and managed club merchandise

Volunteer Illini Projects, Senior Citizens Project Coordinator · Project Coordinator  
Urbana, IL

Dec. 2015 to Dec. 2017

- Organized and executed special bi-weekly volunteer events at the Prairie Winds of Urbana Retirement Home
- Supervised student volunteers during their volunteer work
- Maintained communication with both students and home residents
- Provided fun and enjoyable experiences for university students and senior citizens to interact

## Education

University of Illinois at Urbana-Champaign  
BS Physics and Astronomy 2019

Aug. 2015 to May 2019

The College of Liberal Arts and Sciences, James Scholar, Certificate of Highest Distinction (2016 - 2019), and Certificate of Excellence (2015 - 2019)