**ESTHER LEAH LOWE**

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SUMMARY

Relocating to Los Alamos, NM in November and seeking employment utilizing data science, data analysis, programming (front end, back end, full stack development) and statistical analysis.

EDUCATION

**Northwestern University Graduate Studies**, Chicago, IL

Data Science Bootcamp Certification (October 2019 Completion Date)

**Colorado College**, Colorado Springs, CO

BA, Minor in Applied Mathematics

**Gale Academy**, Statistics Certification

**Pikes Peak Community College**, Chemistry II

TECHNICAL SKILLS

**Programming Techniques & Languages:** Bootstrap, Python, VBA, PostgreSQL, JavaScript, HTML/CSS, \**R*

**Data Manipulation & Visualization:** ETL (Extract Transform Load) methods with Pandas, MatPlotLib, Gmaps, JSON conversion, \**Shiny, \*Tableau, \*Leaflet*, D3, & Beautiful Soup, full stack web development with Flask

**Databases:** Lots of big data in the cloud, large .csv files and databases from the Census Bureau, Google, Kaggle, Open Weather Map, MaxMind GeoLite, Kickstart, New York Times, IMDb, & others

**Other:** Utilize programming tools: Command Line, schema design, Visual Studio Code, Data Modeling & Analysis with Microsoft Excel, Sage, Wolfram Alpha Mathematica, Microsoft Word for technical writing

**\*ANTICIPATED BY OCTOBER: *Machine Learning:*** *Learning with neural networks, sckit learn, some tensorflow*

WORK EXPERIENCE

7/19-8/19 Consultant, Human Resources Data Analyst, Upwork

Transformed large Excel files using Python modules and performed statistical analysis to find and report correlations in employee satisfaction based on managerial behaviors, generation, gender, tenure, position, ethnicity, and department.

12/18-5/19 Shift Manager, Walgreens & Pharmacy Technician, Skokie, IL.

Managed multiple shifts at a Walgreens store. Responsibilities included managing staff of six employees, inventory control, computer and network troubleshooting and repair, and customer relations. Conducted employee training. Certified Pharmacy Technician with HIPPA compliance.

5/13-11/18 Homeschool Teacher and Tutor, Sustainable Community, Boulder & Manitou Springs, Colorado.

Taught primary and secondary school subjects, including mathematics, agriculture, and science classes for home-schooled students. Prepared teaching materials and homework assignments, met with parents and other faculty. Kept records and created classroom project and field trips. Planned and created student gardens on a five-acre property to teach sustainable living and agriculture.

PROJECTS

**Visit** [**https://ellowe.github.io**](https://ellowe.github.io) **or** [**https://github.com/ELLowe**](https://github.com/ELLowe) **for a complete list of Bootcamp projects:**

Projects included Big Data analysis employing API calls, web scraping, and loading over 5 million rows of data from multiple large .csv files, creating and querying SQL databases. Used Javascript and Python to transform and clean data. Performed statistical analysis to create presentations, websites, apps, and reports of findings with geo-mapping, D3 and Plotly.js graphics. Created pivot tables and VBA excel programs for ongoing data manipulation.

**August 2019 - Belly Button Bacteria Full Stack Web Application**

Created a full stack app dashboard with HTML, JavaScript, CSS, Python, and Flask using sqlite files. Used Plotly.js to build interactive charts for the dashboard. Created alternative routes to display the sample metadata.

**August 2019 – UFOs Webpage Project**

Created a basic HTML web page to dynamically display and update a table based on user filter inputs. Used JavaScript D3 table modifications and visualizations. Styled the webpage with raw CSS as well as Bootstrap.

**August 2019 - Youth Risk Behavior ETL SQL Database Project**

Found a dataset from the Center for Disease Control and Prevention reporting the risk behaviors of K to 12 students. Created a SQL database in PGAdmin4 by transforming the data with Python: Selected 15 of 35 columns and roughly 600,000 rows. Made column headers uniform for table creation and foreign key establishment.

**August 2019 - Mission to Mars Webpage & Non-Relational Mongo Database Hosting Project**

Built a web application that scrapes websites for data related to the Mission to Mars in 2020 and displays the information in a single HTML page with Flask. Created a Python application with Beautiful Soup, Pandas, and Requests/Splinter to scrape the data, create a non-relational Mongo database, and update the database.

**June 2019 - Open Weather Map Analysis & Website Visualization Project**

Generated API calls to gather weather data from over 8000 random cities around the world. Used Python modules, Pandas and MatPlotLib, as well as converted the API JSON requests, to clean data. Made scatter plots of results and a heat map to visualize the city locations. Provided an analytical report of the results and flaws in the proposed method as well as a proposal on the revised method. Posted the results on a deployed website.

**July 2019 - HI Surfing Weather SQL Project**

Coded in Python. Used database queries, Pandas, Matplotlib and SQLAlchemy to perform climate analysis. Connected to a Sqlite database in a Jupyter Notebook using SQLAlchemy. Designed queries to determine most active weather stations, retrieved data over a time periods, ordered data, and displayed findings graphically.

**July 2019 - PgAdmin4 Employee SQL Project**

Used data modeling to create a database schema for six csv files. Specified data types, primary keys, foreign keys, and constraints. Engineered the data according to the schema, creating a SQL database in PgAdmin4. Performed data analysis by running queries to list specific information about employees, management, and company history.

**July 2019 - Chicago Crime Project & Presentation**

Analyzed multiple Chicago crime datasets with as many as five million rows of data each. Coded in Python to perform statistical analysis and detect significance in observed potential trends based on season, crime type, and shifts over time. Created a presentation and presented the findings.

**June 2019 - Company Financial Analysis**

Analyzed company data to determine total number of months in the dataset, net profit & loss, average change in profit & loss over that period, greatest increase and decrease in profits (date and amount) over the entire period. Printed output to the terminal as well as a file of easy to understand results that could be sent to interested parties.

**May 2019 - Stock Market Analysis**

Analyzed almost 1 GB of stock ticker data from 2014 – 2016 to compute and display total annual volume for each stock, annual percent change from ticker opening to closing price, and identify the stock with the greatest percent increase, decrease, and total volume each year. Coded in VBA to create the program best suited to analyze the data within Excel. Used conditional formatting for data visualization, created new columns of analysis with size and text formatting for readability and ease of presentation.

**May 2019 - Kickstarter Business Analysis**

Analyzed over 4000 startup businesses to determine factors contributing to success. Created visuals of the analysis results. Using Excel, set conditional formatting to make trends in data more apparent, compute and write new columns in the database of financial analysis. Made pivot tables, converted timestamps, and wrote an analysis for presentation. The project was useful for providing educated business consultation regarding the success of developing a startup company.