

# JU (ANNA) ZHANG

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## Skills

Python, SQL, R, VB Script. MySQL, MongoDB, Hadoop. Machine learning. MS Visual Studio, Tableau. Python 3, NumPy, Pandas, Matplotlib, API, social media mining. Leaflet.js. HTML, CSS, bootstrap, dashboarding, JavaScript charting, D3.js. Beautiful Soup, Tweepy. Modeling, forecasting. Pivot tables, VBA

## Projects

### UNHCR European Refugee Crisis Project

- Generated SQLAlchemy database and created yearly API routes
- Visualized destination countries of refugees on map with year slider and color scale using Leaflet.js
- Created bar charts with dropdown menu by year using D3 and Plotly.js

### Rob Dunn's Lab Biodiversity Project

- Manipulated relational database in Python with SQLAlchemy
- Created API routes in Flask querying for data of different samples
- Plotted pie chart and bubble chart in Plotly.js to display each sample
- Generated metadata section to display key/value pairs from the JSON object
- Built an interactive dashboard with bootstrap layout and deployed a Flask web app to Heroku

### NASA Mars Project

- Built a web application that scraped and displayed new data when the button was clicked
- Scraped various websites, parsed and stored data for Mars images, tables, and tweets using Jupyter Notebook, BeautifulSoup, Requests/Splinter, and MongoDB

### Hawaii Climate Project

- Cleaned, joined and analyzed csv data using Pandas and Python
- Analyzed weather stations and observations using SQLAlchemy ORM queries, and Matplotlib
- Designed queries to retrieve data for the trip period, and sorted and plotted from the DataFrame
- Designed a Flask API based on the deployed queries

### OpenWeatherMap API Project

- Visualized the weather of 500+ random cities across the world of varying latitude
- Perform a weather check on each city using a series of successive API calls using URL endpoints
- Plotted scatter plots using Matplotlib and Seaborn libraries in Python

### Sakila SQL Project

- Wrote SQL queries using Sakila database in MySQL
- Searched for, calculated and modified records using operators, aggregate functions, wildcard functions, subqueries, joins, and aliases

### Twitter Sentiment Analysis Project

- Pulled tweets data of various news outlets and performed a sentiment analysis with Python
- Built scattered plots that showcased the compound polarity using Jupyter Notebook

## Experience

<b>Student</b> <b>The University of Texas at Austin</b> <ul style="list-style-type: none"><li>• Data Analytics And Visualization Boot Camp</li><li>• Certified Data Analyst</li></ul>	<b>04/2018 to 10/2018</b> <b>Austin, TX</b>
<b>Production Intern</b> <b>Trunkist</b> <ul style="list-style-type: none"><li>• Successfully altered patterns, optimized production tech packs, fitting and styling</li></ul>	<b>07/2015 to 06/2016</b> <b>Austin, TX</b>
<b>Researcher/ Analyst</b> <b>University of Connecticut</b> <ul style="list-style-type: none"><li>• Successfully submitted a proposal, and characterized and analyzed copper release</li><li>• Supervised undergraduates' experiments, presented data weekly</li></ul>	<b>08/2010 to 05/2012</b> <b>Storrs, CT</b>

## Education

<b>Master of Science: Environmental Engineering</b> University of Connecticut <ul style="list-style-type: none"><li>• GPA 3.62/4.0, Multidisciplinary Environmental Research Awards for Graduates</li></ul>	<b>2013</b> <b>Storrs, CT, USA</b>
<b>Bachelor of Science: Environmental Engineering</b> Beijing Institute of Technology <ul style="list-style-type: none"><li>• GPA 3.41/4.0, Scholarship for Outstanding Students</li></ul>	<b>2010</b> <b>Beijing, China</b>