# Meng Zhang
## Data Analyst/Data Scientist/Machine Learning Engineer

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## TECHNICAL SKILLS

**Programming Languages:** Python, SQL, Java, PHP
**Data Analysis Tools:** Python Libraries (Numpy, Pandas, Matplotlib, Seaborn), Tableau, Excel, SAS
**Machine Learning Tools & Services:** Scikit-learn, TensorFlow, Caffe, Google Analytics, Microsoft Azure
**Web Scraping:** Requests, Beautiful Soup, Web Scraper (Chrome Plugin)
**Web Design:** HTML, CSS, d3.js

## PROFESSIONAL EXPERIENCE

**Research Assistant: Microsoft Research Image Captioning Project**                              Jan 2019 - present
- Identified two state-of-the-art image captioning algorithms and implemented them to generate captions for a new collection of 40,000 images taken by people who are blind. This involved training deep learning algorithms on GPU machines.
- Performed runtime, resource and accuracy analysis for the image captioning algorithms; for the accuracy analysis, evaluated using five standard natural language processing metrics: BLEU, ROUGE, METEOR, SPICE, CIDEr.

**Research Assistant: Institute of Information Cognition and Intelligent System, Tsinghua University:** *China Mobile Communication Corporation (CMCC) Signaling Data Mining Project*                              July - Sep 2016
- Performed data mining analysis on a big dataset with millions of lines of CMCC signaling data.
- Summarized attributes that influence CMCC's Quality of Service and found relations between these attributes.
- Visualized the analysis results with charts embedded in webpages using HTML, CSS, and the JavaScript D3.js library.

## PROJECTS

**Machine Learning/ Deep Learning Projects**

Company Employee Reviews Analysis                              Feb 2019 - present
- Analyzed employees' reviews about their current or previous employers using TF-IDF analysis, and visualized key insights from the analysis with word cloud.
- Making correlation analysis to test if position/company/turnover has correlation with the numeric ratings to the employers by employees.

Kaggle Competition – Google Quick-draw Image Recognition Challenge                              Oct - Dec 2018
- Applied transfer learning which added a fully-connected layer to the Inception V3 model to let the model fit with hand-drawn doodle images recognition problem.
- Performed convolution neural network to train the model with 6.8 million doodle images and predict top 3 categories of test doodle images.

Crowdfunding Projects Result Prediction (CV/NLP/Web Scraping)                              Oct - Dec 2017
- Used Python to scrape data about crowdfunding projects with images online. Utilized Google Vision Label Detection and TF-IDF method to quantify collected images.
- Applied Logistic Regression to research on the correlations between total raised funds of online crowdfunding projects and the images these projects provide.

**Database Management Project**                              Oct - Nov 2017
- Applied MySQL to store and manage databases of recipes of Chinese foods including ingredients, styles and cuisines.
- Designed and implemented a website to present the recipes via HTML and PHP.

## EDUCATION

**The University of Texas at Austin, School of Information**                              Sep 2017 - present
Master of Science in Information Studies. Cumulative GPA: 3.8/4.0
Courses: *Machine Learning, Statistical Methods, Statistical Analysis & Learning, Applied Encryption, Database Management, Personal Informatics, Peer Production, User Generated Content Analytics*
**Beijing University of Posts and Telecommunications, International School, China**                              Sep 2013 – June 2017
**(Joint Program) Queen Mary University of London, United Kingdom**                              Sep 2013 – June 2017
Joint Program, B.E. in Telecommunications Engineering with Management

## HONORS & REWARDS

- Won first prize of the VizWiz Question Answering Classification Challenge among 22 students.
- Won Best Project Award by popular vote in the class of Machine Learning. (Link)
- Received the 2018-2019 General ISSS Award from UT for great academic performance and community contribution.

**REFERENCES:** Dr. Danna Gurari, UT Austin Professor, danna.gurari@ischool.utexas.edu