Franklin (Qingan) Zhao

117 Veterans Pl, Ithaca, New York 14850
(510) 277 2721
qingan_zhao@berkeley.edu
http://franklinzhao.top
http://github.com/QinganZhao
https://goo.gl/5yajUp

Education

2018 – 2019 (Aug – May) **Master of Professional Studies**
Cornell University
Computing and Information Science

2017 – 2018 (Aug – May) **Master of Science**
University of California, Berkeley
Systems Engineering
GPA: 3.6/4.0

2013 – 2017 (Sept – June) **Bachelor of Engineering**
Dalian University of Technology
Civil Engineering
GPA: 3.9/4.0

Work Experience

Data Science Intern May 2018 – Aug 2018
Deloitte Consulting - AIM Group
- Participated in the design of the customer engagement platform workflow for the client based on DevOps; techniques include Kafka, Kubernetes, MySQL, Spark, and Tableau
- Developed a demo of Single Customer View (SCV) modeling for the client via data processing using Python and Java on Microsoft Azure; a demo of Key Performance Indicator (KPI) analysis platform using Python, SparkSQL, and Tableau on Microsoft Azure
- Conducted industrial desk research and business development strategy; Participated in the Master Data Management (MDM) implementation for the client

Graduate Student Researcher Jan 2018 – May 2018
UC Berkeley College of Engineering
- Conducted research on data science and machine learning for energy (battery) observer and optimization systems development, and auto-driving

Research Assistant Sept 2014 – Aug 2017
State key Laboratory of Coastal and Offshore Engineering
- Conducted research on large-scale regional structural health monitoring, data mining, and rapid evaluation based on smartphone cloud monitoring; Participated in developing 3 iPhone apps

Computer Skills

Programming Languages
Python, R, SQL, Java, C/C++, BASH, HTML/CSS

Software & Tools
Git/GitHub, MySQL, Spark, Tableau, Kafka, MATLAB, Caffe, Tensorflow, Scikit-Learn, Pandas, Seaborn, LaTeX, MS Office, Auto CAD, Adobe Photoshop

Operating Systems
Mac OS X, Windows 10, Linux

Projects

User Query Behavior Monitor: Finance Data Warehouse for a global investment bank Sept 2018 – Present
- Will design the ETL workflow of the logs for the client (From Teradata to Spark)
- Will devise an mechanism and algorithms to identify unwanted data and unnatural patterns using machine learning
- Will develop a visualization tool to present the process and result that provide the insights on suspicious reporting over any time period

Human Driving Behavior Recognition and Prediction
(Website: https://goo.gl/LJZk2X) Jan 2018 – May 2018
- Applied Gaussian Mixture Models to capture different human driving behavior given their high-level decisions and built classifiers to find those high-level intentions
- Implemented a variational autoencoder to learn the representation of different driver behavior models in latent space and make prediction accordingly

Marriage Analysis
(Website: https://goo.gl/D6HY6k) Jan 2018 – May 2018
- Analyzed and predicted the marriage status in Japan using several machine techniques including logistic regression, SVM, decision trees and neural networks based on the census data

GA
(Website: https://goo.gl/H5BJcu) Aug 2017 – Dec 2017
- Wrote an R package for variable selection in regression problems based on genetic algorithm

Deep Learning Based Structural Damage Detection
(Website: https://goo.gl/27C7Sm) Jan 2017 – Aug 2017
- Designed and implemented a damage detection technique for masonry structures based on convolutional neural networks and a sliding window algorithm using Caffe and Python
- Applied Faster-RCNN and achieved an accuracy of 98% (Best accuracy in structural damage detection as of 2017)

Distributed Displacement Measurement Technique for SHM Using Smartphones
(Website: https://goo.gl/C4kgfV) Aug 2015 – Mar 2017
- Designed an algorithm for distributed multipoint displacement monitoring based on computer vision techniques
- Participated in the development of an iPhone app *D-Viewer* for monitoring the micro displacement of structures

Public Participation Emergency Communication and Rapid Loss Evaluation System for Earthquake Zone
(Website: http://www.e-explorer.cn) Jan 2015 – July 2015
- Applied and refined a data mining algorithm to build a loss evaluation system based on the seismic intensity scale of China via collecting questionnaires

Publications

- Wang, N., **Zhao, Q.,** Li, S., Zhao, X., & Zhao, P. (2018). Damage Classification for Masonry Historic Structures Using Convolutional Neural Networks Based on Still Images. *Computer–Aided Civil and Infrastructure Engineering*. (doi: 10.1111/mice.12411)
- Zhao, X., **Zhao, Q.,** Yu, Y., Chen, Y., Liu, H., Li, M., & Ou, J. (2017). Distributed Displacement Response Investigation Technique for Bridge Structures Using Smartphones. *Journal of Performance of Constructed Facilities, 31*(4). (doi: 10.1061/(ASCE)CF.1943-5509.0001025)