Qingan Zhao

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EDUCATION

UC Berkeley
Master of Science in Systems Engineering with the concentration of Data Science
Expected graduate on May 2018 | Berkeley, USA

Dalian University of Technology
Bachlor of Engineering in Civil Engineering
Graduated on June 2017 with **3.87/4.00** GPA | Dalian, China

COURSEWORK

- Foundations of Data Science
- Introduction to Statistical Computing
- Nonlinear and Discrete Optimization
- Control and Optimization of Distributed Parameters Systems
- Convolutional Neural Networks for Visual Recognition
- Machine Learning
- Sensors and Signal Interpretation
- Structure and Interpretation of Computer Programs
- Advanced Mathematics
- Linear Algebra
- Advanced physics
- Probability and Statistics
- Mechanics of Material
- Engineering Geology
- Soil Mechanics
- Structural Mechanics
- Finite Element Analysis
- Reinforced Concrete Structures
- Engineering Economics and Management

SKILLS

Area of skills:

- Data Science
- Deep Learning for Visual Recognition
- Structural Health Monitoring
- Structural Design and Analysis

Programming Languages:

• C • Python • MATLAB • R • BASH • JAVA• HTML

Software and Frameworks:

• AutoCAD • ABAQUS • 3D Studio Max • Revit • Caffe

RESEARCH & INTERNSHIPS

RESEARCH ASSISTANT (Deep Learning, Structrual Health Monitoring, Data Mining, Systems)
Research Center of Structural Smartphone Cloud Monitoring, State Key Laboratory of Coastal and Offshore Engineering
September 2014 - August 2017 | Dalian, China

- Accomplished 3 projects as leader/collaborator funded by Natural Science Foundation of China (51479031, 51278085, 51221961). Topics are within Civil Engineering, Data Science and Computer Science
- Contributions include theoretical analysis, process and application design, approach refining, platform development, laboratory tests, and technical paper writing

PROJECT DEPARTMENT INTERN
China Construction Third Engineering Bureau Co., Ltd, Northeast Branch
June 2016 - August 2016 | Dalian, China

- Participated in Xinghai Financial Business District Project
- Assisted in construction quality control and responsible for writing technical reports

PROJECTS

Deep Learning Application for Structural Damage Detection
Janurary 2017 - August 2017

- Proposed a damage identification and localization technique for masonry structures using convolution neural networks and a sliding window algorithm
- Applied region-based convolutional neural networks (Faster-RCNN) to damage detection for masonry structures

Development of a Distributed Displacement Measurement Technique for Structural Health Monitoring Using Smartphones
August 2015 - March 2017

- Developed a distributed multipoint displacement monitoring technique using smartphones based on image processing
- Participated in the development of a mobile application D-Viewer for monitoring the micro displacement of structures

Large-scale Regional Structural Health Monitoring, Data Mining and Rapid Evaluation Based on Smartphone Cloud Monitoring (www.cloudshm.com)
September 2014 - September 2015

- Utilized the inner sensors of smartphones and external servers to build networks for structural health monitoring
- Participated in the development of a mobile application Orion CC for cloud structural health monitoring (cable force and structural inclination)

PUBLICATIONS

- Zhao, X., **Zhao, Q.**, Yu, Y., Chen, Y., Liu, H., Li, M., and Ou, J. (2016). Distributed Displacement Response Investigation Technique for Bridge Structures Using Smartphones, *Journal of Performance of Constructed Facilities, 04017029* (http://ascelibrary.org/doi/abs/10.1061/(ASCE)CF.1943-5509.0001025)
- Peng, D., Zhao, X., **Zhao, Q.**, and Yu, Y. (2015, September). Smartphone based public participant emergency rescue information platform for earthquake zone-"E-Explorer". *In Proceedings of the International Conference on Vibroengineering, Nanjing, China* (pp. 26-28).