Jiaming Guo

markguo1998@gmail.com | 310.926.3925 | Los Angeles, CA

Education

University of California, Los Angeles - Jun 2021

Master of Science in Statistics

GPA: 3.9/4.0

Relevant Courses: Applied Probability / Research Design and Analysis / Statistical Programming

Peking University, Yuanpei College - Jul 2019

Bachelor of Science in Data Science and Big Data Technology

Relevant Courses: Introduction to Database / Introduction to Data Science / Statistical Learning

Skills

Programming Languages: C++, Python;

Tools: TensorFlow, MATLAB, Linux/Unix Shell, MySQL, JavaScript;

Algorithms: Machine learning (SVM, Boosting, Decision Tree), deep learning.

Experiences (selected)

Inventory Management and Rental System Design | Project Leader Dec 2019 -

Keywords: **UI Design, Software Engineering, Database.**

- I have been designing a software system for one of my friends' equipment rental company, which can help with inventory management (to add/delete/modify a type of equipment) and the generating the rental list for a particular lessee.

Image and Graph Analysis for Alzheimer's Disease | **Mass General Hospital** | RA Sep 2018 - Mar 2019

Advisor: **Quanzheng Li**, associate professor at Harvard Medical School, Harvard University.

Keywords: **Graph Neural Networks, Alzheimer's Disease.**

- Designed both a pretrained Inception V3 CNN and a graph-based method on PET images to predict Mild Cognitive Impairment (MCI) with very high accuracy (92~96% on 400 patients).

Multi–cell Detection and Classification | **Peking University** | Research Assistant Sep 2017 - Oct 2018

Advisor: **Quanzheng Li**, associate professor at Harvard Medical School, Harvard University.

Keywords: **Multi-instance Detection, Overlapping Cell Classification.**

- Built a model with both detection and classification modules to extract cell patches and to classify patches with normal and abnormal red blood cells (RBCs), from sickle class disease (SCD) patient blood samples;
- Our proposed model has achieved high detection and classification accuracy, 93.2% for single–cell patches (exceeding state-of-the-art model with 89.3% acc.) and 72.2% for multi–cell patches;

Bottle Detection in Beer Production Line | **Shaohai Data (Beijing)** | Research Intern Jul 2018 - Aug 2018

Advisor: **Mingyi Yuan**, Chief Technology Officer at Shaohai Data (Beijing).

- Modified and trained a detection model based on Faster-RCNN to detect empty and broken bottles in beer production line, with very high accuracy (0.005%~0.01% error rate).

Data Analysis of Chronic Kidney Disease | **Peking University** | Research Assistant Jul 2017 - Apr 2018

Advisor: **Quanzheng Li**, associate professor at Harvard Medical School, Harvard University;

Luxia Zhang, associate chief physician at Peking University First Hospital.

Keywords: **Machine Learning, Large-scale Data Analysis.**

- Extracted important features in Hospital Quality Monitoring System (HQMS) using Decision Tree algorithm;
- Implemented a corresponding analysis algorithm to reveal unique patterns between patients' health condition and Chronic Kidney Disease (CKD) types, and tried to explain the reason why these patterns arose.