Peiyan Gao

Seattle WA (206)816 9975 pg28@uw.edu

Education

University of Washington, *Seattle WA* *M.S. Biostatistics, SPH* *2018-2020(expected)*

- Relevant Coursework: Statistical inference; Applied Biostatistics; Measure Theory
- Research Interest: Causal Inference; Clinical Trials; Survival Analysis

University of Hong Kong, *Hong Kong* *Bachelor of Science, Statistics* *2013-2018*

- GPA: 3.65/4.3 *First Class Honors*
- Relevant Coursework: Mathematics; Statistics; Computer Science; Finance
- Undergraduate Project Title: Convolutional Neural Networks with Applications in Medical Imaging

University of California, Davis, *Davis CA* *Overseas Exchange Program* *Jan-June 2017*

- GPA: 4.0/4.0
- Relevant Coursework: Mathematics; Statistics

Research Experience

Summer Research Assistant *University of Hong Kong* *July-Aug 2017*

- Used Matlab to examine and Compare the performance of different machine learning techniques, including k nearest neighbors; Support vector machine; Decision tree etc. in the recognition of handwritten digits from the MNIST dataset.
- Improved the recognition accuracy by using 1D&2D principal component analysis to do the dimension reduction of the image data as a preprocessing step.
- Assisted in collecting data, preparing course materials for the statistics department.

Student Researcher *University of Hong Kong* *Sept 2017-May 2018*

- Used python to analyze the applications of deep learning in the classification and segmentation of medical images.
- Inspired by the PCA approach, adapted the deep PCA network in the classification of MRI scans of human brains, where the data comes from ISLES Challenge website. Promising result was generated.
- Classification result was further improved by extending the PCA network into two dimensional.
- Compared the performance of different convolutional neural network structures, including U-net, Residual networks etc. in the segmentation of tumors in human liver scans, where the data comes from Lits Liver Tumor Segmentation Challenge.
- Finished the undergraduate research project titled: "Convolutional Neural Networks with Applications in Medical Imaging."

Student Research Assistant *University of Hong Kong* *June-July 2018*

- Researched on various matrix imputation methods, including alternating least squares; Accelerated Inexact soft impute for missing data imputation.
- Used adaptive and random lasso for high dimensional variable selection.
- Combined the missing value imputation and variable selection together, promising result was generated compared with current literature.

Honors & Awards

- Dean's Honors List, 2015-16 Spring Semester, Faculty of Science, HKU
- Dean's List, 2016-17 Winter & Spring Quarter, College of Letter & Science, UC Davis.
- C.V. Starr Scholarships, 2017, HKU
- Statistics and Actuarial Science(SAAS) Scholarships, 2016-2017, HKU

IT Skills

- R; Python; Matlab(proficient) SAS; C++;SQL(familiar)

Languages

- Chinese(native) English(fluent) French(elementary)