ZHENBANG JIAO

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EDUCATION

University of Michigan, Ann Arbor　　　　　　　　　　　　　　　　　　09/2018 - Present
M.S. in Applied Statistics　　　　　　　　　　　　　　　　　　　　　　Current GPA: 3.94/4
Finished all required PhD courses in Applied Statistics and Theoretical Statistics

Jilin University　　　　　　　　　　　　　　　　　　　　　　　　　08/2014 - 07/2018
B.S. in Statistics　　　　　　　　　　　　　　　　　　　GPA: 89.8/100, Ranking: 3/81
Real Analysis: 94; Mathematical Analysis: 96, 97; Advanced Algebra: 91, 96

SKILLS

R (dplyr, tidyr, Shiny), Python (NumPy, pandas, PyTorch, scikit-learn, Scrapy)
SQL, git, Julia, LaTeX
TOEFL: 108　　GRE: 326+4

RESEARCH EXPERIENCE

Blue Sky Project: Solar Flares Prediction　　　　　　　　　　　　　01/2019 - Present
Graduate Student Research Assistant　　　　　　　　*Dep of Statistics, U of Michigan*

· Mainly developed Hierarchical Multi-Scale LSTM and LSTM mixture model combining classification and regression with novel loss functions and re-weighted response variables
· Performed case studies, ROC, cross validation and importance ranking for inference purpose
· Paper incoming (first author)...

Enrichment test on vaccination data　　　　　　　　　　　　　　　06/2019 - 08/2019
Research Assistant　　　　　　　　　　　　　　　*Dep of Biostatistics, U of Michigan*

· Firstly applied multiple GSEA (Gene Set Enrichment Analysis) algorithms on vaccination data and made corresponding modifications based on the new datas characteristics
· Paper incoming (third author)...

An outlier-insensitive SVM algorithm using Sigmoid function　　　12/2017 - 05/2018
Undergraduate Thesis　　　　　　　　　　　　　*Mathematics School, Jilin University*

· Optimized SVM algorithm by substituting linear slack variables with Sigmoid function.
· Proved that new algorithm has better performance than C-SVM while processing datasets with more outliers

A Study on the College Students' Public Opinion based on Data Mining 05/2016 - 05/2017
Research Project　　　　　　　　　　　　　　　*Mathematics School, Jilin University*

· Wrote crawlers using Python to retrieve large amounts of word vectors as training data from the college students BBS on the internet
· Cleansed the data and did Chinese word segmentation based on the corpus
· Used machine learning algorithms (Naive Bayes, AdaBoost) to analyze the data and filtered altitude and theme words from them

WORK EXPERIENCE

dMed Biopharmaceutical Co., Ltd., Shanghai, China Summer 2017
Statistical Analyst

· Project: An R shiny application: DDCP (data-driven conditional power)

  · Employed Bayesian reasoning, predictive power, conditional power

  · Developed an APP to predict the success rates of clinical trials (including continuous, discrete and time-to-event types) using R Shiny

· Project: Verification of Phase II, III Seamless Design of a drug against Glioblastoma

  · Utilized group sequential design on sample size and information stage calculation

  · Applied Cox hazard proportional model to simulate the results and verify the safety and efficacy of the proposed clinical trial design

· Project: A clinical simulation of an ovarian cancer drug

Jiangsu Provincial CDC, Nanjing, China Summer 2016
Research Assistant

· Project: The application of immune-enzymatic technique on the diagnosis of SFTSV infection

  · Used TG-ROC to determine the cut-off value in a double antigen sandwich ELISA for the diagnosis of SFTSV infection

· Project: Detection of Shiga toxin 2 and its variants in Shiga toxin-producing Escherichia coli strains by a time-resolved fluorescence immunoassay

  · Proved the superiority of TRFIA compared to ELISA by performing regression analysis

Product Dept. China Life Insurance Co., Ltd., Nanjing, China 02/2017 - 03/2017
Assistant Actuary Intern

· Project: Travel inconvenience insurance pricing

  · Built short-term collective risk model to predict the sums of claims based on flight delay records collected from Nanjing Lukou International Airport

· Project: Post-sale survey of a short-term life insurance product in Yancheng

AWARDS

The First Prize Scholarship (first 5%), Jilin University	2015, 2016, 2017
Excellent Student, Jilin University	2016, 2017
Outstanding Undergraduate Thesis	2018
Xianghao Wang Scholarship, Jilin University	2017
The First Prize in China Undergraduate Mathematical Contest in Modeling, Jilin Province	2016