

Guangming Yang

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☎ 608-886-3658

EDUCATION

Nankai University

Bachelor of Statistics

Department of Mathematics

Sep 2015 - July 2019

Overall GPA: 88.4/100

GPA of last 40 credits: 92.7/100

University of Wisconsin - Madison

Master of Data science

Department of Statistics

Sep 2018 - Present

Overall GPA: 4.0 / 4.0

SKILLS

Computer Languages

Python, R, SQL, C++, Matlab

Software & Tools

LaTeX, Mathematica, Linux, Emacs, Slurm Cluster, PyTorch

AWARDS AND ACHIEVEMENTS

- Academic award and scholarship for excellent performance (among top 6/86) in the graduate program. (totally \$2500 in scholarship money), University of Wisconsin-Madison.
- International academic excellence award (2018-2019), University of Wisconsin-Madison.
- Excellent student award at Nankai University (both 2017 and 2018), including a scholarship for academic excellence.
- Annual Mathematical Contest in Modeling (MCM 2018) held in the USA, Honorable mention.

RESEARCH EXPERIENCE

Statistical Consulting

Consultant

Nankai University

June 2017 - Aug 2017

- Implemented some general cleaning and preprocessing to all kinds of raw data provided by clients using different languages.
- Used proper regression and classification methods to build models, then made inference and gave clients feasible suggestions

Theoretical and empirical studies of nested cross-validation strategies

Researcher

UW-Madison

Aug 2019 - Present

- Nested cross-validation is a technique that is widely used for machine learning algorithm selection; however, its theoretical properties and empirical behavior is not well understood in general. In this independent study project (under advisor Prof. Raschka), I am analyzing the behavior of nested cross-validation for different algorithms and datasets in order to make recommendations for the practical use of nested cross-validation techniques.
- About to submit a paper to a conference in the field of Machine Learning.

TEACHING EXPERIENCE

STAT 324. Statistics for engineering

Teaching Assistant

UW-Madison

Sep 2019 - Present

- Led the discussion section by teaching the topics that the professor covered in the lecture; held office hours for students; helped the lecturer grade the homework and exams.

INTERNSHIP AND COURSE PROJECT

Data analysis for transaction data

Data Analyst

The People's Bank of China - Jinzhong Branch

June 2016 - August 2016

- Detected abnormal records in large scale transaction data, and found specific reasons and explanation behind these cases.
- Explained the data analysis procedure to my colleagues with limited knowledge of statistics.

Text classification using Deep Learning

Modelist

UW-Madison

April 2019-May 2019

- For Quora insincere questions detection problem, I used different architectures of LSTM, GRU and CNN, along with some techniques like Attention mechanism and oversampling for imbalance data, to classify the questions and tuned parameters to make my model achieve a good performance.

GRADUATE-LEVEL COURSES

Large sample Theory

Content: Asymptotic theory for parametric and non-parametric inference, the consistency of tests, the asymptotic behavior for statistics like sample moment and quantile, the convergence theorems for dependent or not identical distributed sample cases.

Instructor: Changliang Zou, Nankai University

Statistical Inference II

Content: Used Peter J. Bickel's book to introduce NP-Lemma, Bayes statistics, Existence and Uniqueness of MLE, Minimax rule and its relation with Bayes rule etc.

Instructor: Chunming Zhang, UW-Madison

Statistical Method

Content: About statistical principles for Experimental Design.

Instructor: Wei-Yin Loh, UW-Madison

Statistical learning

Content: Proof of strong or universal convergence of different classification algorithms, Concentration inequalities, VC theory and VC dimension, SVM derivation and three major theorems in RKHS and their application.

Instructor: Patel Vivak, UW-Madison

Intro to Stochastic Process

Content: Limit behavior and Exit properties of Markov Chain, Poisson Process, Renewal Process, Continuous time Markov Chain and its properties.

Instructor: Philip Wood, UW-Madison

Mathematical Statistics

Content: Ph.D qualify exam level courses, using Jun Shao's *Mathematical Statistics*. Statistics based on Measure theory and Real analysis.

Instructor: Zhengjun Zhang, UW-Madison

Multivariate Analysis

Content: Ph.D qualify exam level course, multivariate statistical theory, basic multivariate algorithms, causal inference measure and the basic of ICA and Copula .

Instructor: Zhengjun Zhang, UW-Madison

Nonlinear optimization

Content: Different types of first order descent methods, stochastic optimization, constrained optimization and second order methods, trust region methods and their theoretical properties.

Instructor: Jelena Diakonikolas, UW-Madison