

LONGHAO JIN

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RESEARCH INTEREST

Actuarial Science, Risk Analysis, Data Science

EDUCATION

University of Illinois at Urbana-Champaign

Expected Graduation Date: Dec. 2017

Master of Science: Applied Mathematics concentrated in Actuarial Science

- Overall GPA: 4.00/4.00
- Course Highlights: Methods of Applied Statistics, Stochastic Process, Equity Linked Insurance, Loss Model, Life Contingency

SKILLS

Computer Languages

Python, Matlab, R, VBA

English Tests

TOEFL: 99, GRE General: 323+3.0 (V-153 Q-170)

EXPERIENCE

Predicting car insurance claim via Naïve Bayes and Bayesian Network

Jan. 2017 - May 2017

Project (R), Machine Learning

- Cleaned dataset and selected descriptive features based on the basic principle of data cleaning
- Established the Naïve Bayes Model and Bayesian Network models by R
- Used 5-folds cross validation and Laplace smoothing to train the dataset and found the accuracy of the Naïve Bayes Model and Bayesian Network models

Simulating stock price by using several methods

Jan. 2017 - May 2017

Project (Python), Stochastic process simulation

- Run stock price simulation by using Principle component and Brownian bridge construction
- Compared different methods by the simulation graph, accuracy, and computational complexity
- Applied the methods to Asian call option, simulated the option price and proved the put-call parity

Credibility Theory in Property/Casualty Homeowners Ratemaking

Mar. 2017 - Apr. 2017

Case study(Excel), Loss model

- Calculated basic statistics of losses such as frequency, severity, and pure premiums
- Based on Classical and Buhlmann Credibility methods, evaluating statistics for variance of hypothetical means, expected process variance and credibility
- Utilized actuarial judgment and principles in selecting a credibility complement

Learning Decision Tree

Feb. 2017

Course Project (Java), Machine Learning

- Trained Decision Trees by using ID3 algorithm. Found root attribute and child attributes by using Entropy function and Information Gain function
- Divided a badges dataset into 5 equally part, using Stochastic Gradient Descent(SGD) and five-fold cross validation to tune the parameters (included learning rate and error threshold)
- Evaluated different algorithms' (SGD and Decision Tree) average accuracy on unseen dataset. Decided whether the results are statistically significant by t-test

AWARDS

- Second Prize of the scholarship for Outstanding Students at Fudan University *2012*
- Professional scholarship at Fudan University *2012 - 2015*
- Top 100 in the Mainland of Munich Reinsurance Actuarial Competition *June 2015*
- Scholarship of Practice for Undergraduate in Fudan university (5 students per year) *Oct. 2015*