

Boyang Zhang

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Education

Ohio State University, PhD in Animal Science	2016 - Expected Dec. 2021	Columbus, OH
Ohio State University, Master of Applied Statistic	2018 - Expected Jun. 2021	Columbus, OH
Northeast Agricultural University, Bachelor of Science in Agriculture	2012 - 2016	Harbin, China

Skills

Programming Python, C++, R, SQL, Swift, Object-oriented Programming, Data Structures, and Algorithms

Libraries and Tools Pandas, Numpy, Sk-learn, Tensorflow/Keras, Matplotlib, Google Cloud Platform, Amazon Web Services and Git

Key Courses

Graduate-level Statistics Data Analysis, Spatial Analysis, Applied Stochastic Process, Theory of Statistical Analysis, Design and Analysis of Experiment, Nonparametric Analysis, Applied Multivariate Analysis, Discrete Analysis.

Experiences

Ohio State University [Columbus, OH](#)
PhD Student and Researcher: Modeling and Statistics Analysis Aug. 2016 - Present

- **Machine Learning for Pollution Prediction:** Built generalized LASSO models for emission prediction based on microbe and animal data with R. Compared new model performance with Forward selection using cross validations.
- **Bayesian Network Modeling for Prediction of Milk Quality:** Analyzed microbiome data from animal. Used variable selections with ensemble learning and causal graph-networks to model nutrition and digestion in animal for predictions of milk quality.
- **Causality Modeling:** Analyzed 10TB metagenomic data with Cloud Computing. Creatively discover relationship between bacteria growth and greenhouse gas emissions from animal. Used double machine learning model to estimate unbiased effect of microbe growth on greenhouse gas emission.

Ohio State University [Columbus, OH](#)
Teaching Assistant: Statistics and R Programming Aug. 2018 - Jun. 2020

- **Teaching Assistant of Applied Biometric (ANSCI 7000):** Provided statistics and coding assistance for undergraduate and graduate student during R coding lab.
- **Teaching Assistant of Data Analysis (ANSCI 2260):** Provided recitation and coding assistance for undergraduate student during labs.

Certification and Project

AWS Certified Machine Learning – Specialty [Amazon Web Service](#)
Oct. 2020

- In-depth understanding of AWS machine learning services.
- Ability to build, train, tune, and deploy ML models using the AWS Cloud.

Google Cloud Certified Professional Data Engineer [Google Cloud](#)
Oct. 2020

- Design data processing systems; Build and Operationalize Data Processing Systems.
- Operationalize Machine Learning Models.

Projects: Audio Transcription using Swift [Github link](#)
Aug. 2020

- An implementation of audio transcription in Swift.
- Used CoreML to automatically transcript audio to text.

Projects: Automatic Number Plate Recognition using SVM and Neural Networks Dec. 2020

- An implementation of automatic plate recognition using C++, OpenCV, and Tensorflow.
- Computer Vision, Support Vector Machine, Convolution Neural Network

Projects: R program for estimations of bacteria growth using multivariate analysis Dec. 2019

- Designed PCA and Factor analysis, and wrote R codes for estimation and simulation of bacteria growth with metagenomics data.

Award

National 2nd Prize, China Undergraduate Mathematical Contest in Modeling [Mathematical Modeling](#)
Aug. 2013

- Led a team to develop Poisson model for traffic predictions. Analyzed and presented our results to the committee.