Lin Quan

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EDUCATION

PhD student in Statistics	2021 – present	Iowa State University (ISU)
M.S. in Statistics	2018 - 2021	Iowa State University (ISU)
M.S. of Science in Physics	2012 - 2017	University of Science and Technology of China
B.S. of Science in Physics	2008 - 2012	Central China Normal University

Skills

Statistics:

- Statistical modeling, experimental design, hypothesis testing.
- Statistical theory and method including linear algebra, Bayesian methods, machine learning algorithms for prediction and classification.

Computer skills:

- R programing (capable of data cleaning, visualization and programming); SAS (statistical analysis);
- LaTeX (writing articles or other documents) and Microsoft Office.

Language: English; Mandarin (native).

WORKING EXPERIENCE

Department of Statistics, ISU

- Research Assistance — August 2019 to May 2021

Industrial and Commercial Bank of China (ICBC)

- Internship — June 2018

PROJECT/RESEARCH EXPERIENCE

- Piecewise linear regression for leaf appearance rate data (Advisors: Prof. Dan Nettleton)

  Our objective was to use segmented regression to model the relationship between the number of plant leaves and thermal time for hundreds of maize genotypes. We first use SAS program to analyze data with repeated measures. The we estimated the breakpoints with least-square method and compared inferences obtained from the *segmented* R package with inferences obtained by bootstrap techniques.

- Survey analysis residential landlord decision-making during the COVID-19 Pandemic

  (Advisors: Prof. Lily Wang, Prof. Jane Rongerude, Prof. Biswa Das, Prof. Dan Kuhlmann)

  The objective was to investigate the factors that are influencing the decision making of residential rental property owners during the COVID-19 Pandemic. We collect each city's landlord information

and do the data clean to build up the database and make a dashboard (including HTML) for the public. We are also interested in how the tenant/business-friendly pandemic responses are related to the survey questions. We use different feature selection methods (i.e., correlation, random forest) to reduce the number of explanatory variables.
Here is the link of the dashboard: https://covidrental.design.iastate.edu.

- Report and analysis phenology data (Advisors: Prof. Dan Nettleton)

  The objective was to investigate the bloom time of 83 different plants among seven consecutive years. The Logistic non-linear regression model was employed well to fit the data for each plant per year. We ranked the plants among seven years. Then, we visualized and calculated the correlation of the ranks by Pearson's product-moment method.

- Bayesian Analysis on Ames House Data

  We tried to build the hierarchical model with Bayesian approach of the Ames house pricing. We investigate characteristics in home size, quality, age, neighborhoods that may affect the price of the house.

- Analysis of Food Preference of US College Students

  We found the connection between college students' food preferences and features such as parents' education level, frequency of parents cooking and GPA/life rewarding scores. We performed data cleaning and data visualizations in R.