YIWEN ZHANG

yiwenzhang@pitt.edu | +1 412-352-5579

EDUCATION

University of Pittsburgh Pittsburgh, PA
Ph.D in Psychology (Cognitive) with Quantitative Minor, GPA 4.0 2019 – 2024

Zhejiang University Hangzhou, China
B.S. in Psychology, GPA 3.88/4.0 (honored graduation, ranked #1 in Department of Psychology) 2015 – 2019

EXPERIENCE

User Research Intern, Advanced Driver-Assistance Systems (ADAS) Nov 2018 – Apr 2019
Montaube Design (Hangzhou) Ltd. Co. Hangzhou, China
Mentor: Dr. Fang Chen, Chalmers University of Technology, Gothenburg, Sweden

- This project aimed to design user-friendly interface panels for ADAS and provide information for ADAS industry regulation in China
- Investigated User Experience of ADAS based on Tesla Model S, Volvo XC60 and Geely Borui GE by one-to-one interview

SELECTED PROJECTS

Bayesian Modeling of Episodic Memory in Causal Learning Mar 2020 – Present
Advisor: Dr. Ben Rottman, University of Pittsburgh Pittsburgh, PA

- The goal of this study is to figure out the underlying strategies subjects are using when doing causal judgement.
- Built probability models for multiple potential strategies
- Ran **MCMC** with 10K+ iterations averaging multiple potential models(strategies) to capture subjects' behavior using **JAGS and R**

Causal Learning Under Interrupted Time Series May 2020 – Present
Advisor: Dr. Ben Rottman, University of Pittsburgh Pittsburgh, PA

- Investigated whether people will infer illusory causal relationship based on interrupted time series.
- Implemented **interrupted time series analysis**, **ANOVA, Bayes Factor and post hoc test** and **visualized** the results using R (tidyverse, ggplot2)

Mobile-based Long-term Real-life Causal Inference Study Aug 2019– Present
Advisor: Dr. Ben Rottman, University of Pittsburgh Pittsburgh, PA

- Designed a between-subject long-term experiment to investigate how people process delayed causal information
- Recruited 200+ subjects, performed **regression**, **Bayes factor** and **permutation test** to analysis data using **R**
- Engaged in the full-stack development of mobile based study, using Flask, Firestore and Vue.js
- Shared this experiment as a template for designing, programming, and running Psychology experiments in the cloud, wrote tutorials and instructions to share this template to psychology community.

A Machine Learning Approach to Predict Human Causal Judgement March 2020 – May 2020
Applied Machine Learning, Carnegie Mellon University Pittsburgh, PA

- Explored using machine learning classifiers to predict human causal judgement by comparing performance of different ML algorithms (Naïve Bayes, J48, LWL, SVM) by cross-validation
- Trained and optimized a model by using bagging with J48 classifier to predict causal judgement in a psychology experiment and significantly increased performance by 5%

SKILLS

Methods

- Working with data: R (tidyverse), Python (numpy, pandas), SQL, SPSS
- Stats expertise: Bayesian Modeling, Regression, Hierarchical and Mixed Effects Modeling, Categorical Data Analysis, Model Selection and Dimension Reduction, Neural Network, Reinforcement Learning，Resampling(Cross Validation, Bootstrap)
- Other expertise: Experimental and Survey Design

Web development

- JavaScript, HTML/CSS, Vuejs, Flask, Github, Google Cloud, Google firestore, and Unity(C#)

PUBLICATIONS & POSTERS

Zhang, Y., Yang, Z., Liang, J., Wu, F., Gao, Z. (2018, July). Object-based Attention, not Spatial Attention, is Critical for Encoding Feature Binding in Visual Working Memory. Poster presented at the 14th Asia-Pacific Conference on Vision and the 3rd China Vision Science Conference