Wenbin Teng

jerryteng95626@gmail.com | +86-13236556959
LinkedIn: https://www.linkedin.com/in/wenbin-teng/ | GitHub: https://github.com/wbteng9526

EDUCATION

Boston University Boston, MA
B.A. in Statistics, B.A. in Economics; GPA 3.77/4.00 September 2015 – January 2019

- Magna Cum Laude, Dean's list (7 semesters)
- Undergraduate Research Opportunity Program Student Research Award

PROJECT & RESEARCH EXPERIENCE

Face Anti-Spoofing with Unsupervised Domain Adaptation October 2020 – March 2021
Collaborator: Department of Computer Vision Technology, Baidu Inc.

- Proposed an unsupervised domain adaptation framework to improve cross-database face anti-spoofing performance
- Conducted video data preprocessing, landmark detection and face alignment with MATLAB and Python
- Trained the network and developed experiments with PaddlePaddle and PyTorch
- Finished a first-authored paper and submitted the paper to ICCV 2021 Conference

Adversarial attacks and defenses for Rendering—Autoencoders of Faces May 2020 – Present
Advisor: Allan L. Yuille, Bloomberg Distinguished Professor, Johns Hopkins University

- Constructed 3D faces with 3D Morphable Model (3DMM) and converted 3D model into 2D pixel through image rasterization techniques
- Trained an unsupervised model-based autoencoder to extract semantic information of 2D face images in PyTorch
- Performed iterative Blackbox adversarial attack through perturbation optimization

Unimodal Face Classification with Multimodal Training January 2020 – May 2020
Advisor: Bernardo Cuenca Grau, Professor of Computer Science, Oxford University

- Architected a multimodal training and unimodal testing (MTUT) on face classification task
- Generated encoded feature embeddings with ResNet-18 and PointNet; decoded to original input with convolutional transpose layers; backpropagated reconstruction loss and correlation divergence
- Established optimization algorithm with PyTorch; results outperformed state-of-the-art face classification methods
- Finished a first-authored paper and submitted to ACMMM Conference 2020

Model Selection Protocol Simulation Research January 2018 – August 2018
Advisor: Allen Gregg Harbaugh, Research Associate Professor, MS in Statistical Practice, Boston University

- Re-examined patterns of model selection protocols such as Mallow's *Cp*, information criteria, cross validation sum of square and adjusted R-squared by operating 700,000 multiple linear regressions repeatedly with simulated data
- Compared different selection protocols' ability in differentiating between true variables, spuriously related variables and spuriously unrelated variables
- Carried out experiments for comparing the probability of selecting the "exact" model; concluded that Akaike information criteria (AIC) outperforms the other protocols
- Established linear modelling system that could simulate dataset with various characteristics and apply multiple protocols in Rstudio, achieved parallel processing by writing batch scripts in Unix
- Presented primary experiment result in Modern Modelling Methods (MMM) Conference 2018; presented project poster in Boston University Undergraduate Research Opportunity Program (UROP) symposium

WORK EXPERIENCE

The Economist Intelligence Unit Cambridge, MA
Economic Analyst February 2019 – May 2020

- Updated Global Income Distribution Database (GIDD) by harmonizing macroeconomic data from multiple open sources including UN, IMF, BEA and Census
- Improved database web interface by designing detailed use-cases through crawling and analyzing customer behaviors data with Selenium, presented result to senior management
- Spearheaded in upgrading database from linked Excel workbook to SQL Server Management Studio; maintained data integrity during extraction from multiple sources, manipulation and processing
- Generated customized income distribution datasets by quantifying relationship between regions' population, household income and Gini coefficient through polynomial regression and Newton-Raphson method

EXTRACURRICULUM ACTIVITIES

- **Modern Modelling Methods Conference**, *Volunteer*, Boston, MA May 2018—June 2018
- **Harvard College China Forum**, *Volunteer*, Boston, MA April 2018—April 2018
- **Boston Area Model United Nations Conference**, *Crisis Staffer*, Boston, MA September 2017—October 2017

SKILLS

- **Computer**: Python, R, Linux, SQL, Tableau, MATLAB, VBA, Microsoft Office, Unix
- **Machine Learning**: PyTorch, TensorFlow, PaddlePaddle, Scikit-learn
- **Languages:** Native in Chinese (Mandarin), Fluent in English
- **Interests**: Badminton, Fitness, Cooking