IN SON ZENG

insonz@umich.edu
https://son520804.github.io
University of Michigan, Ann Arbor

Education

BS, Mathematics and Applications, The University of Macau Sep.2013 - Jun.2017
Minor: Music Sep.2014 - Jun.2017
GPA: 3.17/4.00

MS, Applied Statistics, The University of Michigan - Ann Arbor Sep.2017 - Dec.2018
GPA: 3.66/4.00

Research Experience

Research Assistant, School of Information, University of Michigan, Ann Arbor Mar.2020 - present

- Recorded 30-minute long lecture material for 3 video compositions, wrote an autograded coding assignment and a retention test with ten multiple choice questions covering topics of Bayesian Statistics in Python (BinderHub link)
- Designed a quasi-experiment that involves three playback speed options and three video composition conditions
- Estimated the differing affective responses, knowledge transfer and information retention among 9 condition groups by Bayesian Estimation Supersedes the t Test
- Deployed BinderHub on Google Kubernetes Engine to enable teaching programming, sharing educational materials and reproducing scientific analysis publicly at low cost and with interactivity

Research Assistant, School of Public Health, University of Michigan, Ann Arbor Jun.2018 - Mar.2019

- Simulated, debugged and calibrated the Michigan Model of Diabetes (MMD) with 350 variables and functions in six sub-models through agent-based modeling in Java-based Anylogic
- Calibrated the risk factors and transition probabilities of type 2 diabetes to estimate disease progression for 30 years
- Documented the complete tutorial of MMD through a 50-page MMD user manual to support the clinical evaluation in University of Michigan Health System and disease prevention in Public Health departments

Team Lead, NeurIPS 2020 Education Challenge Aug.2020 - Oct.2020

- Conducted learning analytics for a log data involving 1.3M+ rows containing interactions from 4.9K+ students
- Implemented Light Gradient Boosting Machine to rank the quality of 948 diagnostic questions, achieving 0.80 agreement fraction

Teaching Experience

Instructional Aide, School of Information, University of Michigan, Ann Arbor Aug.2020 - present

- Created 30+ lecture videos on Bayesian statistical thinking and data visualization in Python to Coursera
- Maintained the Coursera Shell and Slack channels for 250+ student classes (SIADS 505 and SIADS 521)
- Prebuilt 10+ Python data manipulation and animated visualization projects to give weekly office hours (link)

Graduate Student Instructor, University of Michigan, Ann Arbor Sep.2018 - Dec.2018

- Organized the STATS 412 courseware and summarized each lecture by writing class notes in GitHub (link)
- Clarified misconceived statistical concepts via an integration of technical and non-technical explanations (example)

Honors and Awards

Meritorious Winner at 2017 COMAP Interdisciplinary Contest in Modeling Apr.2017
The Second Prize at China Undergraduate Mathematical Contest in Modeling Nov.2016

Technical Skills

Programming Languages: Python, R, Anylogic(Java based), Netlogo(Java based), JavaScript, Stata, SAS, Matlab, SPSS, CSS
Frameworks: Latex, Overleaf, Google Kubernetes Engine, Helm, Docker, Django, Vissim
Language: Portuguese (Fluent), Cantonese (Native), Mandarin (Fluent), English (Fluent)