YU-TAO CHEN

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EDUCATION BACKGROUND

Huazhong University of Science and Technology (HUST) *2015.09-2019.06*

Major: Management Science Honor Class (MIS-oriented) Cumulative GPA: *3.95/4.00*

Degree: Bachelor of Management, Expected June 2019

IMPORTANT COURSES TAKEN

Calculus(87)
Probability Theory and Mathematical Statistics(98)
Linear Algebra(95)
Advanced Programming Language (C++) (94)
Java Programming(88)
Database Technologies and Applications(94)
Business and Management Simulation(91)
Management Information System(98)
Operational Research(92)
Game Theory(99)
Econometrics(98)
Data Structure(In Progress)

RESEARCH EXPERIENCE

(Research Materials available at https://github.com/cytwill/Research-Papers.git)

Computational Organization Theory-based Research on Evolution Mechanism of Public Opinions on Internet Live Broadcast Platforms (National-funded Project)

Team Leader | Advisor: **Bin Hu**, Professor, School of Management, HUST *2017.05-Present*

- Referenced Opinion Dynamics (SJBO) to build model, and modified the model hereof by considering factors of Negativity bias & Positivity Offset, and Expression Mechanism
- Conducted Multiple-Agent Simulation of the modified SJBO model in Python to analyze how the variations in cognitive factors influence the evolution of the opinions of agents
- Performed Sentiment Analysis on texts of time-serial screen bullets collected from online live platforms, including Douyu, with NLP interfaces like BosonNLP, models like Naive Bayes and customized sentiment lexicons, to verify simulation models
- Executed Empirical Study on emojis contained in screen bullets to gain their sentiment scores

Award received: **Qualification**, National Undergraduate Innovation and Enterprise Training Project

Development and Application of Virtual Reality Project (Big-data Lab Workshop)

Team Leader | Advisor: **Shuqin Cai**, Professor, School of Management, HUST *2018.07-2018.09*

- Front-end developed **VR library** application with Unity3D and C#, and utilized VRTK and SteamVR to connect PC to VR hardware and to realize interactive functions like flipping pages in VR scenes
- Back-end utilized C# to connect VR system with SQL Server to collect and store user information in VR, and applied WinForm toolkit to conduct UI design and realize information retrieval function

The Interdisciplinary Contest in Modeling (MCM/ICM)

Team Leader | Advisor: **Bin Hu**, Professor, School of Management, HUST *2018.02*

Project: Methodology to detect the climate change impact on national stability

- Hierarchical Model Building constructed a three-layer linear model based on fragility states indexes to score the stability of nations and offered classification of the stability score with long-tail theory
- Pattern Identification analyzed whether variations in climatic factors like temperature and rainfall influence the national stability directly or indirectly with the Pearson correlation test
- Case study of Germany utilized Moving Average Method with time-series data from NASA and World Bank to predict climate change trends of Germany and its effect on national stability

Award received: **Meritorious Winner** (Top 10%)

Business and Social Data Mining Training (Big-data Lab Training)

Participant | Advisor: **Yukun Bao**, Professor, School of Management, HUST *2017.11-2018.01*

- Familiarized with data mining algorithms, including Classification (C4.5, ANN…), Association Rules (Apriori), and Clustering (K-means, EM…) with Weka, SPSS and python.scikit-learn package
- Optimized the algorithms' performance by adjusting parametric settings (C4.5) or active functions (ANN) in social (congressional voting, credit approval) or industrial (inventory) datasets

SEIR Model-Based Research on Diffusion of Internet Rumors

Member | Advisor: **Wei Huang**, Associate Professor, School of Management, HUST *2017.11-2017.12*

- Improved traditional SEIR Model by taking into account of differences between temporary and permanent immunity as well as linear and nonlinear forms of rumor heat attenuation
- Used python to conduct simulation on improved SEIR model, and conducted sensitivity analysis to obtain results of effects of change of parameters on the ratios of rumor-affected crowd
- Conducted analysis of SNS topology structure with python.networkx package and user nodes of Facebook as datasets to determine how the degree of nodes influence the rumor propagation

Social Survey：Current Situation and Future Development of WeChat Business for College Students

Member | Advisor: **Huimin Ma**, Professor, School of Management, HUST *2016.06-2016.09*

- Information Sourcing designed comprehensive questionnaires, and collected information from different groups, including college students, companies and industry researchers through interviews
- Data Processing completed independent analysis to each question with WJX survey system and Excel, and conducted cross-over analysis between multiple questions
- Data Analysis Drew conclusions in aspects of cost, revenue, products, channels and service quality of WeChat business and raised proposals for further practitioners and regulators of this business mode

Award received: **Outstanding Team,** HUST (Group) and **Social Practice Model,** HUST (Individual)

EXTRACURRICULAR ACTIVITIES

President, Management Science Honor Class Association *2016.09-2017.09*

- Arranged, planned, and organized interviews for the admission of MS Honor Class
- Planned and organized major arts events and other activities, including graduation parties

Lead Singer and Team Leader, Personal Band *2017.09-Present*

- Organized and performed at various settings on and off campus

Volunteer, Students International Communication Association (SICA) *2016.03-2016.06*

- Taught Chinese to an international student from Indonesia in speaking and writing

HONORS AND AWARDS

Scholarship for Academic Excellence, HUST (Top 10%) *2016-2017 Academic Year*

Scholarship for Outstanding Performance in Arts and Sports Activities, HUST *2015-2016 Academic Year*

Runner-up, Top Ten Singers Contest, School of Management, HUST *2015.12*

SKILLS AND QUALFICATIONS

- Programming language—C++, C#, Java, Python
- Statistics and others—Anaconda, Anylogic, Arena, MATLAB, Microsoft Office, SPSS and Weka
- Qualifications—Level 2 Certificate for Computer Science (C++)