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)
Organizational Behavior and Management(97)

RESEARCH EXPERIENCE

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

Computational Organization Theory-based Research on The Opinion Evolutionary Mechanism 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 a new model, and modified the model hereof by considering factors of Negativity bias & Positivity Offset, and the Expression Mechanism
- Conducted Multiple-Agent Simulations 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 broadcast platforms like Douyu, through NLP interfaces like BosonNLP or models like Naive Bayes with customized sentiment lexicons, to verify the simulation model
- 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 a **VR library** project with Unity3D and C#, and utilized VRTK and SteamVR to connect PCs to VR hardware and to realize interactive functions like flipping pages in VR scenes
- Back-end utilized C# to connect the VR system with SQL Server to collect and store user information in VR, conducted UI design with the WinForm toolkit and realized information retrieval functions

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 state indexes to score the stability of nations and set classification rules of stability scores with the long-tail theory
- Pattern Identification analyzed whether variations in climatic factors like temperature and rainfall influence national stability directly or indirectly with the Pearson correlation tests
- Case study of Germany utilized the Moving Average Method with time-series data from NASA and World Bank to predict the climate change trend in Germany and its effect on Germany's 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 packages
- Optimized the algorithms' performance by adjusting parametric settings (C4.5) or active functions (ANN) when handling 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 the traditional SEIR model by taking into account the differences between temporary and permanent immunity as well as linear and nonlinear forms of rumor heat attenuation
- Used python to conduct simulations on the improved SEIR model, and conducted sensitivity analyses to obtain the effects of changes in parameters' values on the ratio of rumor-affected crowd
- Conducted analysis of SNS topology structure with the python.networkx package and user nodes of Facebook as datasets to determine how the degrees of nodes influence the rumor propagation

Social Survey: Current Situations 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 analyses to each question with WJX survey system and Excel, and conducted cross-over analyses between logically linked questions
- Data Analysis Drew conclusions in aspects of costs, 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 art events and other activities, including graduation parties

Lead Singer and Team Leader, British Rock Band *2017.09-Present*

- Organized rehearsals and performed at various campus music festivals

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*

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

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++)