HAOLIN YANG

Room No. 225 ◇ Building 13 ◇ Tsinghua University ◇ Beijing, 100084
hl-yang20@mails.tsinghua.edu.cn +86 19916530119

EDUCATION

Tsinghua University **Sept. 2020 - June 2024 (Expected)**
Bachelor of Arts in English Language (GPA: 3.94/4.0)
Minor in Economics and Finance (GPA: 4.0/4.0)
Minor in Statistics (without degree) (GPA: 4.0/4.0)
Core Courses: Linear Algebra, Linear Regression Analysis, Real Analysis, Econometrics, Applied Stochastic Processes

Cornell University **July 2022 - Aug. 2022**
Summer Program, Cornell Institute for China Economic Research
Core Courses: Coding for Applied Economists (A+), Behavioral Economics (A+), Applied Econometrics (A+)

HONOR AND AWARDS

Academic Execellence Scholarship (2022-2023)

RESEARCH INTERESTS

Network Analysis, Graph Neural Network, International Trade

PUBLICATIONS AND MANUSCRIPTS

1 Yang, H. Impact of China's import restrictions on global waste paper trade network: 2017-2022 and predictions to 2025. Submitted to *Sustainable Production and Consumption*
2 Yang, H. How did COVID-19 and the COVID-19-related policies influence the international energy trade network: Based on network analysis and regression. Submitted to *Energy*
3 Zhang, Y., Yang, F., Yang, H. & Han, S. Does check-in help? Understanding L2 learners' autonomous check-in behavior in an English language MOOC through learning analytics. Accepted by *ReCALL* with minor revisions

RESEARCH EXPERIENCES

Automatic Post-Editing of English-Chinese Machine-Translated Academic Texts **Jan 2024 -**
- Applied the OpenNMT-APE Automatic Post Editing algorithm to the ParaMed English-Chinese parallel corpora to study the performance of automatic post-editing techniques in the English-Chinese translation of academic texts.
- Performed comparative statistical analyses as concerning the BLEU and TER scores of the raw MT texts and the APE texts
- Qualitatively examined the performance of the OpenNMT-APE algorithm by investigating whether it helped to correct the MT errors and its failure scenario

China's Import Bans and Global Waste Paper Trade **Aug. 2023 – Nov. 2023**
- Constructed, fitted, and validated complex network models over 380000 waste paper trade flows among 151 countries between 2017 and 2022 in the Global Waste Paper Trade Network (GWPTN)
- Analyzed the impact of China's two waste paper import restriction policies in the timespan by investigating the trends in the network-level, community-level, as well as country-level indicators in the GWPTN
- Used the Naive Bayes classification algorithm to predict the links in the GWPTN in 2025 and used community detection techniques to explore the evolution of the community structure of the GWPTN till 2025

COVID-19 and the Chinese medical insurance reimbursement list **April 2023 – Sept. 2023**

- Collected a total of 217 provincial medical insurance reimbursement lists made by the Chinese provincial healthcare authorities between 2016 and 2022
- Leveraged linguistic feature extraction techniques to categorize the drugs in the provincial lists according to two standards: whether they are locally produced and whether they are intended for COVID-19-related symptom
- Used Difference in Differences (DiD) techniques to identify the pattern of changes in the provincial medical insurance reimbursement lists since the outbreak of COVID-19 **Impact of COVID-19 on Global Energy Trade Network** **April 2023 – Aug. 2023**
- Constructed the global energy trade network consisting of the top 25 energy trading countries between 2019 and 2022
- Collected information concerning the government responses to the COVID-19 pandemic in more than 200 countries between 2019 and 2022
- Quantified the impact of the pandemic on the global energy trade network by tracing the trends in the network-level and the node-level indicators
- Used panel regression techniques to examine the correlation between the COVID-related policies adopted by the countries and their power dynamics in the network

Factor Analysis and Language Education Assessment Instrument **Feb. 2023 – June 2023**

- Wrote two chapters on factor analysis in a monograph titled *Statistical Methods in Language Education Studies*, which is currently in press
- Analyzed the similarities and differences between principal component analysis and exploratory factor analysis in theoretical and practical terms and discussed how they tend to be misused in many language education studies
- Applied the two analytical methods to the data collected by administering the Chinese Version of the Foreign Language Enjoyment Scale (C-FLES) to 260 high school English learners in China
- Used the two analytical methods to confirm a three-factor latent construct that underlies the 11 items in the scale and identified two items as being potentially redundant

Teacher-Student Interactions in Online Asynchronous Classrooms **April 2022 – June 2022**

- Utilized Social Network Analysis techniques to model 986 instances of teacher-student interactions in chatrooms and discussion forums of an English MOOC on the XueTangX platform
- Compared the structure of the interaction networks in the first two months and the last two months of the MOOC by examining the changes in the network indicators including density, reciprocity, and degree centrality

Check-in Behaviors and Academic Performance in MOOC **March 2021 – April 2022**

- Collected and cleaned the academic performance data of 11296 students of an English MOOC on the XueTangX platform including their check-in instances and scores in assignments and tests
- Conducted chi-square test of independence and logistic regression to reveal to what extent students' check-in behaviors affect their course completion rates
- Conducted Mann-Whitney U tests between the students who checked in regularly and those who did not check in to determine the differences in their learning behaviors

SKILLS

Statistics / Data Analysis:	Proficiency in R, Python, Stata Extensive experience in network analysis and simulation in R and Python
Languages:	TOEFL 117: Reading 30, Listening 30, Writing 30, Speaking 27; GRE 339+5.0: Verbal 169, Quantitative 170, AW 5.0; Mandarin (native), German (C1)