Terence, Junjie LIU

Mᴘʜɪʟ Sᴛᴜᴅᴇɴᴛ | Oᴘᴇɴ Sᴏᴜʀᴄᴇ Aᴅᴠᴏᴄᴀᴛᴇ

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BNU-HKBU United International College

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Education

Hongkong Baptist University *(joint with BNU-HKBU United International College)*
Zhuhai & HKSAR, China

Mᴘʜɪʟ sᴛᴜᴅᴇɴᴛ ɪɴ Mᴀᴛʜᴇᴍᴀᴛɪᴄs (Pʀᴏʙᴀʙɪʟɪᴛʏ ᴀɴᴅ Sᴛᴀᴛɪsᴛɪᴄs)
2021-2023

- Full Scholarship
- Research Interest:
  1. Statistical Inference
  2. Reasoning and Probabilistic Model
  3. Graphical Model and Complex Network
  4. Computational Social Science and Social Network
  5. HPC Structure and Resource Optimization

Hongkong Baptist University (BNU-HKBU United International College)
Zhuhai, China

Bᴀᴄʜᴇʟᴏʀ ᴏғ Sᴄɪᴇɴᴄᴇ (Hᴏɴᴏᴜʀs) ɪɴ Sᴛᴀᴛɪsᴛɪᴄs
2016 – 2020

- Second Class Honours
- Activities, Awards and Societies:
  1. **Co-Funder** and **Core team member** of a CS interest group: UICHCC `https://www.uichcc.com`
  2. USBC Cluster (UIC-Statistics Bayes Cluster) Administrator `https://uicstat.com/wiki`

Experience

BNU-HKBU United International College
Zhuhai, China

Rᴇsᴇᴀʀᴄʜ Assɪsᴛᴀɴᴛ ᴜɴᴅᴇʀ Dʀ. Yᴜ-Hᴜɪ DENG & Pʀᴏғ. Hᴜᴀ-Xɪᴏɴɢ HUANG' s sᴜᴘᴇʀᴠɪsɪᴏɴ
June 2020 - August 2021

- ShanXi Province Stroke Data Analysis
- Diabetic Kidney Disease Data Analysis
- Market & Social Media Sentiment Index
- Implementation of Statistical Model and Deep Neural Network in Financial Data Analysis

Lᴀʙ Mᴀɴᴀɢᴇʀ & Sᴇʀᴠᴇʀ Aᴅᴍɪɴɪsᴛʀᴀᴛᴏʀ - Dᴇᴘᴀʀᴛᴍᴇɴᴛ ᴏғ Sᴛᴀᴛɪsᴛɪᴄs
June 2018 - August 2020

- Built the first high-performance computing cluster: USBC (UIC-STAT Bayes Cluster) in UIC-STAT department
- GitHub link: `https://github.com/Bayes-Cluster`

Uɴᴅᴇʀɢʀᴀᴅᴜᴀᴛᴇ Sᴛᴜᴅᴇɴᴛ Rᴇsᴇᴀʀᴄʜᴇʀ ᴜɴᴅᴇʀ Pʀᴏғ. Kᴀɴɢ-Tᴏᴏ TSANG's sᴜᴘᴇʀᴠɪsɪᴏɴ
June 2019 - August 2020

- Asymmetric Cryptography Algorithm Acceleration with Heterogeneous Structure

Guangzhou IPLOOK Network Technology Co Ltd
Guangzhou, China

Mᴀɴᴀɢᴇᴍᴇɴᴛ Iɴᴛᴇʀɴ; Mᴇɴᴛᴏʀ: Mʀ.Jɪᴀɴ Wᴀɴɢ
June 2020 - August 2020

- Business Data Analytics
- Sales Technique
- Human Resurce Management Technique
- Leadership

Shenzhen Long shun Sheng Electronic Co Ltd
Shenzhen, China

Rᴇsᴇᴀʀᴄʜ Iɴᴛᴇʀɴ; Mᴇɴᴛᴏʀ: Mʀ.Zʜɪᴊɪᴀɴɢ LIU
May 2018 - August 2018

- Business Data Analytics:
  1. Identifies target customers
  2. Exchange Rate Forecasting
  3. Route Planning in Logistics
  4. Decision Making

Skills

Data: collecting, cleaning, mining, analysis, visualization
Programming Language: Python (intermediate) || R (intermediate) || MATLAB (beginner) || Shell script (intermediate).
Natural Language: Chinese (Mandarin & Cantonese) || English with IELTS score 6.5
Statistical Methods:
  (a) Predictive modeling (regression, time series)
  (b) Statistical Inference (Bayesian Approach)
  (c) Hypothesis testing and Confidence intervals
Deep Learning: Most of the basic Neural Network model (CNN, RNN, and its variant). My interest is in the interpretability of deep learning and deep probabilistic model.
Operating Systems: macOS & Linux & Microsoft Windows

Selected Publications

JOURNAL

1. **Jun-Jie Liu**, Kang-Too Tsang & Yu-Hui Deng (2022) "A variant RSA acceleration with parallelisation" *International Journal of Parallel, Emergent and Distributed Systems* `https://doi.org/10.1080/17445760.2021.2024535`
2. **LIU, J.**, SUN Yiyang, Ma Jing, Tu Jiachen, DENG Yuhui, HE Ping, HUANG Huaxiong, ZHOU Xiaoshuang, & XU Shixin (2021). "Analysis of main risk factors causing stroke in Shanxi Province based on machine learning models." *Informatics in Medicine Unlocked,* 100712. `https://doi.org/10.1016/j.imu.2021.100712`
3. Ma, J., Sun, Y., **Liu, J.**, Huang, H., Zhou, X., & Xu, S. (2021). Multi-objective optimization and explanation for stroke risk assessment in Shanxi province. (in review at) *Scientific Reports* `https://arxiv.org/abs/2107.14060`
4. Hui, D., Sun, Y., Xu, S., **Liu, J.**, He, P., Deng, Y., ... & Li, R. (2022). Analysis of clinical predictors of kidney diseases in type 2 diabetes patients based on machine learning. *International Urology and Nephrology*, 1-10. `https://link.springer.com/article/10.1007/s11255-022-03322-1`

PROCEEDINGS

1. **J.J. Liu**, X.L. Peng, Y.H. Deng (2021). "Online Statistics Teaching-assisted Platform with Interactive Web Applications using R Shiny." (accepted by) *The 6th International Symposium on emerging Technologies for Education* `https://sete2021.uic.edu.cn`
2. **J.J. Liu**, K.K. Tsang, Y.H. Deng et al., "Improved Parallel RSA Cryptosystem with GPU for Network Information Security", *In The International Conference on Natural Computation, Fuzzy Systems and Knowledge Discovery*, 1061–1068, 2020. `https://doi.org/10.1007/978-3-030-70665-4_115`

Teaching

Teaching Assistant - COMP1023 Foundations of C Programming, BNU-HKBU UIC	Sem 1, 2022-2023
Teaching Assistant - MATH1173 Linear Algebra, BNU-HKBU UIC	Sem 2, 2021-2022
Teaching Assistant - STAT4103 Introduction of Deep Learning with Python, BNU-HKBU UIC	Sem 1, 2021-2022

Presentations

Online Statistics Teaching-assisted Platform with Interactive Web Applications using R Shiny. – SETE 2021 Conference Oral, T2-201 (BNU-HKBU UIC)	2021
Improved Parallel RSA Cryptosystem with GPU for Network Information Security – FSKD-ICNC 2020 Conference Oral, Online	2020
Alice, Bob & Eve's Story - UICHCC Event, T8-305 (BNU-HKBU UIC)	2019
Collaborating and Converging - UICHCC Event, T8-306 (BNU-HKBU UIC)	2018

Selected Projects

The Practice of Heuristic Teaching Mode Based on Interactive Visualization and the Establishment of Intelligent Evaluation System

WITH DR.YUHUI DENG IN BNU-HKBU UNITED INTERNATIONAL COLLEGE   *December 2021 - present*

- develop a python toolbox which can be used in optimization course to visualize the
- GitHub: `https://github.com/Bayes-Cluster/MESOCP`

Modern Elementary Statistics Online Computing Platform

WITH DR.XIAOLING PENG IN BNU-HKBU UNITED INTERNATIONAL COLLEGE   *December 2021 - present*

- A online statistics teaching assisted platform, Proudly powered by R and shiny
- This work is supported by Guangdong Natural Science Foundation No.2018A0303130231
- GitHub: `https://github.com/Bayes-Cluster/MESOCP`

Next Generation Web-based Portal for USBC (Ongoing)

LEADER   *December 2021 - present*

- Started from 2018, USBC Maintenance Group provides technical support for UIC-STAT servers. In 2020, it successfully built the first computing cluster USBC, and over 100 researchers and students from department of statistics and data science using this cluster to conduct their research and projects.
- GitHub: `https://github.com/Bayes-Cluster/Code-Hub`

CEDApy: An Economic Data API package (Ongoing)

LEADER   *December 2021 - present*

- This is a "all-in-one" economic data collecting library, with both python
- You can check it on GitHub: `https://github.com/TerenceLiu98/CEDApy`

NewsFeed: Newsfeed based on GDELT Project

LEADER   *December 2021 - present*

- Based on the GDELT project, we are trying to build a newsfeed api for gathering the latest and historical news for easy investigation on the relation difference countries and the impact of the unexpected events
- You can check it on GitHub: `https://github.com/Cyclododecene/newsfeed/`