JIEWEN LIU

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EDUCATION

McGill University **Montreal, Canada**
B.A. in Computer Science and Statistics Sept. 2018 – Dec. 2021

- GPA: 3.93/4.00
- Selected awards: Dean's Honor List (top 10% GPA), Arts Undergraduate Research Internship Award (ARIA) (scholarship for outstanding students' summer research projects)
- Work samples, research reports available: https://github.com/NoBirdInTree/Code_Report
- Selected Courses: Regression and Analysis of Variance, Generalized Linear Model, Mathematical Statistics 1&2, Applied Machine Learning, Epidemiology: Introduction and Statistical Models

PUBLICATIONS

- **(Submitted)** J Xu, X Hao, R Zhan, X Jiang, A Jin, J Xue, A Cheng, J Liu, J Lin, X Meng, H Li, L Zheng, Y Wang. "The Effect of Lipoprotein(a) on Stroke Recurrence Attenuates at Low LDL-C and Inflammation Levels". American Stroke Association (ASA). STROKE/2021/034924-TR3.

- **(Under Review)** Q Liu, J Xue, H Cui, Q Zhang, Y Zhang, H He, J Liu, K Li, B Zhao, B Ning, Z Lin, J Liu, L Zheng, S Wang, "Inhibition of integrin αv prevents intracranial aneurysms from rupture". Journal of the American College of Cardiology (JACC). Manuscript ID: JACC-102121-4035.

- **(Accepted Workshop)** Z Yang, A Imouza, K Pelrine, S Lévy , J Liu, G Desrosiers-Brisebois, J Godbout, A Blais, and R Rabbany. "Online Partisan Polarization of COVID-19". 2021 International Conference on Data Mining Workshops. Paper ID: DM821.

RESEARCH EXPERIENCE

Peking University **Beijing**
Assistant to Lemin Zheng, vice chairman, Institute of Cardiovascular Sciences Sept. 2021-Jan. 2022

- Conducted cardiovascular disease data analysis in the project guided by Zheng, a former researcher at the Cleveland Clinic
- Studying the relationship between biomarkers and the development of disease and supporting wet lab operations
- One manuscript submitted to JACC with ID: JACC-102121-4035, accessible at my Github.
- One manuscript submitted to ASA with ID STROKE/2021/034924-TR3, accessible at my Github

McGill University Department of Computer Science, Mila Institute **Montreal, Canada**
Assistant to Prof. Reihaneh Rabbbany Jan.-Apr. 2021
Political Polarization on Social Media during U.S. Election

- Helped scrape data from Twitter and Parler to Mongo DB, data cleaning, preparing json files
- Selected proper model for word embedding (BERT) and finished the script
- Communicated with political science professors every week, chose proper benchmark for the quantitative analysis
- Explored and interpreted the results from our graph convolution neural network

- One paper accepted by IEEE ICDM Workshop with ID: DM821, accessible at my Github

McGill University Dept. of Epidemiology, Biostatistics & Occupational Health **Montreal, Canada**
Assistant to Prof. Nicole Basta Sept.-Dec. 2020
COVID-19 Vaccine Tracker & COVID-19 Survey Dashboard
Funding source: McGill Interdisciplinary Initiative in Infection and Immunity

- Assisted in building up the COVID-19 vaccine tracker
- Wrote Python scripts to process the data sorted from WHO's reports and prepared them for visualization on Wordpress
- Helped Canadian Longitudinal Study on Aging (CLSA) to create as well as maintain the dashboard for the statistics from COVID-19 related surveys using RShiny
- Project webpage: https://covid19.trackvaccines.org/ **(Find me named Tyler Liu at Our Team)**
- The manuscript submitted to The Lancet Digital Health titled "Tracking CVID-19 Vaccine Development and Approvals: An Online Resource that Simplifies the Evolving Global Landscape of COVID-19 Vaccines", accessible at my Github. *(Since there is no the option of the group authorship and the cap is 5, I am listed in the group acknowledgement.)*

McGill University Dept of Epidemiology, Biostatistics & Occupational Health **Montreal, Canada**
Assistant to Prof. Erica E. M. Moodie May-Aug. 2020
G-dWOLS Analysis of Fire Suppression Methods' Effectiveness on Alberta Wildfires
Funding source: ARIA and NSERC Discovery Grant awarded to Prof. Moodie

- Learned the basic knowledge of observational studies in biostatistics. Emphasis was put on the notion of dynamic treatment regime (DTR). Understood the methodology of causal inference in the context of biostatistics, especially the value-searching and regression-based techniques
- Grasped a novel causal inference approach called generalized-dynamic weighted OLS to finish an in-depth data analysis on Alberta's wildfire dataset. Investigated the effectiveness of various fire suppression methods and the interaction between different factors
- Drafted a formal report, accessible at my Github

WORK EXPERIENCE

Liquid Capital Group **Chengdu, China**
Quantitative Research Assistant May– Jul. 2021

- Carried out mathematical modeling on China's CTA option trading market and forecast absolute daily volatility rankings. Independently accomplished a complete regression-based prediction pipeline with feature engineering and advanced techniques. The final intermediate-frequency strategy achieved more than 22% annual returns while maintaining historical maximum drawdown lower than 4% over four years in the backtest
- Learned PDE and FE. Partially reproduced some papers' results. Supported the team

ADDITIONAL INFORMATION

GRE: Verbal 165, Quant 169
Languages: Mandarin Chinese, English
Interests: Green Fingers, Culinary Arts