Liyuan Liu

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Professional Appointments

2021.08-Present	Assistant Professor, Department of Decision & System Sciences, Haub Business School, Saint Joseph's University
2020.01-2020.05	Instructor (STAT1401 Elementary Statistics), Department of Statistics and Analytical Science, Kennesaw State University
2018.08	Instructor, Tableau Bootcamp, Analytics and Data Science Institute, Kennesaw State University
2017.09-2017.12	R Programming Tutor, Department of Statistics and Analytical Science, Kennesaw State University

Education

2017.08-2021.08	Ph.D. in Analytics and Data Science, College of Computing and Software Engineering, Kennesaw State University, USA (GPA: 4.00) Dissertation: Incentive-based Data Exchanging and Sharing Mechanism Design Dissertation Advisor: Dr. Meng Han Committee Members: Dr. Yi Pan, Dr. Jennifer Priestley, Dr. Jing (Selena) He, Dr. Faming Li
2015.08-2016.12	M.S. in Analytics, J. Mack Robinson College of Business, Georgia State University, USA
2012.08-2013.12	M.A. in Financial Economics, College of Liberal Arts & Education, University of Detroit Mercy, USA
2008.09-2012.06	B.B.A. in Human Resource Management, School of Economics and Management, Nanjing University of Information Science & Technology, China

Research Experience

2017.08-2021.08   Graduate Research Assistant, Analytics and Data Science Institute, Kennesaw State University

- Conducted applied research in collaboration with partners from both the private and public sectors.

2018.05-2019.06   Data Science Researcher, Novelis Research Lab

- Visualized the data related to personnel, performance metrics, and human resource-related initiatives.
- Developed an HR (Human Resource) analytics framework to support enterprise make decisions and managerial strategies.
- Found actionable insights that helped the enterprise to optimize HR management system, such as performance management, payroll, training, development, etc.

2018.01-2018.05   Data Science Researcher, Equifax Research Lab

- Explored open banking data and identified the essential attributes.
- Developed a credit model utilizing different advanced machine learning techniques.

2015.09-2016.09   Graduate Research Assistant, Institute for Insight, Georgia State University

- Crawled 500 companies' 8K,10K,10Q files from sec website and stored them in the database.
- Parsed 8K,10K files (xbrl, xml) in machine learning to understand the companies' perspective on their business environment.
- Used text mining to understand the relationship between stock price and 10K's sentiment.

Publications

Journals

[1] **Liu, L.,** Yu, B., Han, M., Yuan, S.,& Wang, N. (2019). Mild Cognitive Impairment Understanding: An Empirical Study by Data-driven Approach, BMC Bioinformatics. DOI: https://doi.org/10.1186/s12859-019-3057-1 (Impact Factor: 2.213)

[2] Wynn, C., Ray, H., & **Liu, L.** (2019). The Relationship between Metacognitive Reflection, PBL, and Postformal Thinking among First-Year Learning Community Students, Learning Communities Research and Practice.

[3] Han, M., Miao, D., Wang, J.,& **Liu, L.** (2019). A Balm: Defend the Clique-based Attack from a Fundamental Aspect, Journal of Combinatorial Optimization. DOI: https://doi.org/10.1109/TNSE.2018.2830307 (Impact Factor: 0.816)

[4] Howton, A., McGrew, M., Staples, L., **Liu, L.,** & Ray, H. (2019). Syllabus Influence on Student Performance in an Online Gen Ed Wellness Course, Journal of Effective Teaching in Higher Education.

Conferences

[1] **Liu, L.,** Akkineni, S., Story, P., & Davis, C. (2020). Using HR Analytics to Support Managerial Decisions: A Case Study. Proceeding in The Annual ACM Southeast Conference 2020. DOI: https://doi.org/10.1145/3374135.3385281

[2] Zhou, Y., Han, M., He, S., **Liu, L.,** Xu, X., & Gao, X. (2020). Abnormal Activity Detection in Edge Computing: A Transfer Learning Approach. Proceeding in The IEEE International Conference on Computing, Networking and Communications (ICNC). DOI: https://doi.org/10.1109/ICNC47757.2020.9049794

[3] **Liu, L.,** Priestley, J., Zhou, Y., Ray, H., & Han, M.(2019). A2Text-Net: A Novel Deep Neural Network for Sarcasm Prediction. The First IEEE International Conference on Cognitive Machine Intelligence. DOI: https://doi.org/10.1109/CogMI48466.2019.00025 (Best Student Paper Award)

[4] Zhou, Y., Han, M., **Liu, L.,** He, S., & Gao, X. (2019). The Adversarial Attacks Threats on Computer Vision: A Survey. Proceeding in The 16th IEEE International Conference on Mobile Ad-Hoc and Smart Systems Workshop. DOI: https://doi.org/10.1109/MASSW.2019.00012

[5] **Liu, L.,** Han, M., Zhou, Y., & Parizi, R. (2019). E2C-Chain: A Two-stage Incentive Education Employment and Skill Certification Blockchain. The 2nd IEEE International Conference on Blockchain (Blockchain-2019). DOI: https://doi.org/10.1109/Blockchain.2019.00027 (Accept rate: 15.9%)

[6] **Liu, L.,** Han M., Zhou Y., & Wang Y. (2018). LSTM Recurrent Neural Networks for Influenza Trends Prediction. Bioinformatics Research and Applications. ISBRA 2018. DOI: https://doi.org/10.1007/978-3-319-94968-0_25 (Accept rate: 24.6%)

[7] **Liu, L**., Han M., Wang Y., Zhou Y. (2018). Understanding Data Breach: A Visualization Aspect. Wireless Algorithms, Systems, and Applications. WASA 2018. DOI: https://doi.org/10.1007/978-3-319-94268-1_81

[8] Zhou, Y., Han, M., **Liu, L**., He, J., & Wang, Y. (2018). Deep Learning Approach for Cyberattack Detection. Proceeding in IEEE International Conference on Computer Communications Workshop. DOI: http://10.1109/INFCOMW.2018.8407032

[9] Zhou, Y., Han, M., **Liu, L.,** Wang, Y., Liang, Y., & Tian, L. (2018). Improving IoT Services in Smart-home Using Blockchain Smart Contract. IEEE International Conference on Internet of Things (iThings). DOI: http://10.1109/Cybermatics_2018.2018.00047

[10] Han, M., Miao, D., Wang, J., & **Liu, L.** (2018). Defend the Clique-based Attack for Data Privacy. International Conference on Combinatorial Optimization and Applications (pp. 262-280). DOI: https://doi.org/10.1007/978-3-030-04651-4_18

Book Chapters

[1] **Liu, L**., & Han, M. (2019). Privacy and Security Issues in the 5G-Enabled Internet of Things. 5G-Enabled Internet of Things, 241. DOI: https://doi.org/10.1201/9780429199820

[2] **Liu, L.,** Han, M., Zhou, Y., & Parizi, R. (2019). Blockchain-based Certification for Education, Employment, and Skill with Incentive Mechanism. Blockchain Cybersecurity, Trust, and Privacy. DOI: https://doi.org/10.1007/978-3-030-38181-3_14

Posters and Abstracts

[1] **Liu, L**. (2020). Improving Classification Performance from Imbalanced Data: Case Studies. Abstract session at the INFORMS 2020 Virtual Annual Meeting.

[2] **Liu, L.,** Han M., Zhou Y., & Taasoobshirazi G. (2020). A Data-driven Approach to Understand Mild Cognitive Impairment from Imbalanced Data Using SAS®. E-Poster session presented at the 2020 SAS Global Forum, Washington, DC.

[3] **Liu, L.,** Han M., Zhou Y., & Wang Y. (2019). LSTM and GRU Neural Networks for Influenza Trends Prediction with Multiple Data Resources. Poster session presented at 2019 Southern Data Science Conference, Atlanta, Georgia.

[4] **Liu, L**.,& Staples, L. (2018). How to Prevent the Best and Most-experienced Employee Turnover with SAS EM. E-Poster session presented at the 2018 SAS Global Forum. Devor, Colorado.

[5] **Liu, L**., Zhou, Y., & Baidoo, E. (2018). Dog Breed Classification on Image Data Using Transfer Learning. Poster session presented at the 2018 Southern Data Science Conference, Atlanta, Georgia.

[6] **Liu, L**., Zhou, Y., & Kang, M. (2018). Predict Credit Risks from Imbalanced Data. Poster session presented at the Kennesaw State University 2018 Fall C-day, Kennesaw, Georgia.

Professional Activities

- Session Chair, Decision Science Institute 52nd Annual Conference, 2021.
- Reviewer, Language Resources and Evaluation, 2021.
- TPC Member, The IEEE International Conference on Blockchain, 2021.
- TPC Member, The IEEE International Conference on Blockchain, 2020.
- TPC Member, The 2nd International Workshop on Advances in Artificial Intelligence for Blockchain, 2020.
- Reviewer, IEEE Access, 2020.
- Reviewer, The Annual ACM Southeast Conference, 2019.
- Reviewer, Journal of Computer Networks and Communications, 2018.
- Session Chair, International Conference on Algorithms, Systems, and Applications of Wireless Networks (WASA), 2018.

Certifications

- SAS Certified Base Programmer
- SAS Certified Advanced Programmer
- SAS Certified Statistical Business Analyst Using SAS 9: Regression and Modeling

Selected Honors and Awards

2020.08 Ph.D. Research and Publication Award, College of Computing and Software Engineering, Kennesaw State University

2019.12 Student Travel Grants, The 5th IEEE International Conference on Collaboration and Internet Computing

2019.12 Best Student Paper Award, The First IEEE International Conference on Cognitive Machine Intelligence

2018.11 First Place C-day Competition, College of Computing and Software Engineering, Kennesaw State University

2012.06 The Third Prize Scholarship, School of Economics and Management, Nanjing University of Information Science and Technology

2012.06 Honors Student, School of Economics and Management, Nanjing University of Information Science and Technology