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WORK EXPERIENCE

Amazon Web Services
Applied Scientist

Santa Clara, CA
June 2025 - Present

EDUCATION

Carnegie Mellon University
Ph.D., Computer Science Department

Pittsburgh, PA
Aug 2021 - May 2025

Advisors: Christos Faloutsos and Leman Akoglu

National Chiao Tung University
M.S., Computer Science and Engineering

Hsinchu, Taiwan
July 2017 - July 2020

Advisor: Vincent S. Tseng

REFEREED PUBLICATIONS APPEARED

1. **Lee, M.C.**, Zhu, Q., Mavromatis, C., Han, Z., Adeshina, S., Ioannidis, V.N., Rangwala, H., Faloutsos, C., “HybGRAG: Hybrid Retrieval-Augmented Generation on Textual and Relational Knowledge Bases”. *Annual Meeting of the Association for Computational Linguistics (ACL)*, 2025.
2. Deforce, B., **Lee, M.C.**, Baesens, B., Serral Asensio, E., Yoo, J., and Akoglu, L., “TSA on AutoPilot: Self-tuning Self-supervised Time Series Anomaly Detection”. *SIAM International Conference on Data Mining (SDM)*, 2025.
3. **Lee, M.C.**, Shekhar, S., Yoo, J., and Faloutsos, C., “Discovery and Exploitation of Generalized Network Effects”. *Pacific-Asia Conference on Knowledge Discovery and Data Mining (PAKDD)*, 2024.
4. Posam, L., Shekhar, S., **Lee, M.C.**, and Faloutsos, C., “DiffFind: Discovering Differential Equations from Time Series”. *Pacific-Asia Conference on Knowledge Discovery and Data Mining (PAKDD)*, 2024.
5. **Lee, M.C.***, Zhao, L.*, and Akoglu, L., “Descriptive Kernel Convolution Network with Improved Random Walk Kernel”. *ACM Web Conference (WWW)*, 2024.
6. **Lee, M.C.**, Yu, H., Zhang, J., Ioannidis, V.N., Song, X., Adeshina, S., Zheng, D., and Faloutsos, C., “NetInfoF Framework: Measuring and Exploiting Network Usable Information”. *International Conference on Learning Representations (ICLR)*, 2024. (Spotlight).
7. Cazzolato, M., Vijayakumar, S., **Lee, M.C.**, Vajiac, C., Park, N., Fidalgo, P., Traina, A., and Faloutsos, C., “CallMine: Fraud Detection and Visualization of Million-Scale Call Graphs”. *ACM International Conference on Information and Knowledge Management (CIKM)*, 2023.
8. Yoo, J.*, **Lee, M.C.***, Shekhar, S., and Faloutsos, C., “Less is More: SLIMG for Accurate, Robust, and Interpretable Graph Mining”. *ACM SIGKDD Conference on Knowledge Discovery and Data Mining (KDD)*, 2023.
9. Vajiac, C., **Lee, M.C.**, Kulshrestha, A., Levy, S., Park, N., Olligschlaeger, A., Jones, C., Rabbany, R., and Faloutsos, C., “DELTASHIELD: Information Theory for Human-Trafficking Detection”. *ACM Transactions on Knowledge Discovery from Data (TKDD)*, 2023.

10. Cazzolato, M., Vijayakumar, S., Zheng, X., Park, N., **Lee, M.C.**, Chau, D.H., Fidalgo, P., Lages, B., Traina, A., and Faloutsos, C., “TGRAPP: Anomaly Detection and Visualization of Large-Scale Call Graphs”. *AAAI Conference on Artificial Intelligence (AAAI)*, 2023.
11. Cazzolato, M., Vijayakumar, S., Zheng, X., Park, N., **Lee, M.C.**, Fidalgo, P., Lages, B., Traina, A., and Faloutsos, C., “TgraphSpot: Fast and Effective Anomaly Detection for Time-Evolving Graphs”. *IEEE International Conference on Big Data (BigData)*, 2022.
12. Vajiac, C., Chau, D.H., Olligschlaeger, A., Mackenzie, R., Nair, P., **Lee, M.C.**, Li, Y., Park, N., Rabbany, R., A., and Faloutsos, C., “TrafficVis: Visualizing Organized Activity and Spatio-Temporal Patterns for Detecting and Labeling Human Trafficking”. *IEEE Visualization Conference (IEEE VIS)*, 2022. (Best Paper Honorable Mention)
13. Nair, P., Li, Y., Vajiac, C., Olligschlaeger, A., **Lee, M.C.**, Park, N., A., Chau, D.H., Faloutsos, C., and Rabbany, R., “VisPaD: Visualization and Pattern Discovery for Fighting Human Trafficking”. *ACM International World Wide Web Conference (WWW)*, 2021.
14. **Lee, M.C.***, Shekhar, S.*, Faloutsos, C., Hutson, T.N., and Lasemidis, L., “GEN²OUT: Detecting and Ranking Generalized Anomalies”. *IEEE International Conference on Big Data (BigData)*, 2021.
15. **Lee, M.C.**, Nguyen, H., Berberidis, D., Tseng, V.S., and Akoglu, L., “GAWD: Graph Anomaly Detection in Weighted Directed Graph Databases”. *IEEE/ACM International Conference on Advances in Social Network Analysis and Mining (ASONAM)*, 2021.
16. Vajiac, C., Olligschlaeger, A., Li, Y., Nair, P., **Lee, M.C.**, Park, N., Rabbany, R., A., Chau, D.H., and Faloutsos, C., “TrafficVis: Fighting Human Trafficking through Visualization”. *IEEE Visualization Conference (IEEE VIS)*, 2021. (Best Poster Honorable Mention)
17. **Lee, M.C.***, Vajiac, C.*, Kulshrestha, A., Levy, S., Park, N., Jones, C., Rabbany, R., and Faloutsos, C., “INFOSHIELD: Generalizable Information-Theoretic Human-Trafficking Detection”. *37th IEEE International Conference on Data Engineering (ICDE)*, 2021.
18. **Lee, M.C.**, Zhao, Y., Wang, A., Liang, P.J., Akoglu, L., Tseng, V.S., and Faloutsos, C., “AUTOAUDIT: Mining Accounting and Time-Evolving Graphs”. *IEEE International Conference on Big Data (BigData)*, 2020.
19. **Lee, M.C.**, Huang, Y., Ying, J.J.C., Chen, C., and Tseng, V.S., “DeepIdentifier: A Deep Learning-Based Lightweight Approach for User Identity Recognition”. *15th International Conference on Advanced Data Mining and Applications (ADMA)*, 2019.
20. Huang, Y., **Lee, M.C.**, Tseng, V.S., Hsiao C.J. and Huang C.C., “Robust Sensor-based Human Activity Recognition with Snippet Consensus Neural Networks”. *16th IEEE International Conference on Wearable and Implantable Body Sensor Networks (BSN)*, 2019.

IN THE NEWS

Honeybee Health Monitoring

March 2025

- MSN
- CMU News

INFOSHIELD for Human Trafficking Detection

May 2021

- WPXI
- CMU News