

# Yijun Lin

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## Education

2021 -	Ph.D., Computer Science, University of Minnesota, Twin Cities, USA
2018 - 2021	Ph.D., Computer Science, University of Southern California, USA (Transferred to UMN after Aug. 2021)
2015 - 2017	M.S., Data Science, University of Southern California, USA
2011 - 2015	B.S., Information Securities, Tongji University, Shanghai, China

## Honors & Awards

2022-2024	<b>UMN DSI-ADC Fellowship</b>
2023	<b>Student Travel Award</b> , the 31st ACM SIGSPATIAL International Conference on Advances in Geographic Information Systems
2023	<b>Third Place, Best Poster Award &amp; Student Travel Award</b> , SIAM International Conference on Data Mining
2022	<b>First Place, Map Feature Extraction Challenge, AI for Critical Mineral Assessment Competition</b> . Duan, W., Li, Z., Lin, F., <b>Lin, Y.</b> , Shrotriya, T., Knoblock, C. A., Chiang, Y.-Y.
2020	<b>Student Travel Award</b> , IEEE International Conference on Data Mining
2019	<b>Student Travel Award &amp; Excellent Service Award</b> , IEEE CIC, CogMI, IEEE TPS <b>Student Travel Award</b> , the 27th ACM SIGSPATIAL International Conference on Advances in Geographic Information Systems
2018	<b>Student Travel Award</b> , the 26th ACM SIGSPATIAL International Conference on Advances in Geographic Information Systems

## Publications

**Lin, Y.** and Chiang, Y.-Y. (2023). Modeling Spatially Varying Physical Dynamics for Spatiotemporal Predictive Learning. In *Proceedings of the 31st ACM SIGSPATIAL international conference on advances in geographic information systems (accepted)*, Hamburg, Germany

- Kim, J., Li, Z., **Lin, Y.**, Namgung, M, Jang, L., and Chiang, Y.-Y. (2023). The mapKurator System: A Complete Pipeline for Extracting and Linking Text from Historical Maps (Demo Paper). In *Proceedings of the 31st ACM SIGSPATIAL international conference on advances in geographic information systems (accepted)*, Hamburg, Germany
- Lin, Y.** and Chiang, Y.-Y. (2022). A Semi-Supervised Learning Approach for Abnormal Event Prediction on Large Network Operation Time-Series Data. In *Proceedings of the 2022 IEEE International Conference on Big Data*, pp. 1024-1033, Osaka, Japan
- Lin, Y.**, Chiang, Y.-Y., Franklin, M., Eckel, S. P. and Ambite, J. L. (2020). Building Autocorrelation-Aware Representations for Fine-Scale Spatiotemporal Prediction. In *Proceedings of IEEE International Conference on Data Mining (ICDM)*, pp. 352-361, Sorrento, Italy (**9.8% acceptance rate**)
- Chiang, Y-Y. and **Lin, Y.** (2020). Design, Development, Testing, and Deployment of GIS Applications. *The Geographic Information Science & Technology Body of Knowledge* (4th Quarter 2020 Edition), John P. Wilson (Ed.). doi: 10.22224/gistbok/2020.4.2
- Karroum, K., **Lin, Y.**, Chiang, Y. Y., Ben Maissa, Y., El Haziti, M., Sokolov, A. and Delbarre, H. (2020). A review of air quality modeling. *MAPAN*, 35(2), 287-300
- Chiang, Y.-Y., **Lin, Y.**, Franklin, M., Eckel, S. P., Ambite, J. L. and Ku, W.-S. (2019). Building Explainable Data Analytics for Location-Dependent Time-Series Data. In *Proceedings of the First IEEE International Conference on Cognitive Machine Intelligence (CogMI)*, pp. 202–209, Los Angeles, CA, USA (Invited paper)
- Lin, Y.**, Mago, N., Gao, Y., Li, Y., Chiang, Y.-Y., Shahabi, C. and Ambite, J. L. (2018). Exploiting spatiotemporal patterns for accurate air quality forecasting using deep learning. In *Proceedings of the 26th ACM SIGSPATIAL international conference on advances in geographic information systems*, pp. 359 – 368, Seattle, WA, USA
- Nguyen, K., Yang, J., **Lin, Y.**, Lin, J., Chiang, Y.-Y. and Shahabi, C. (2018). Los Angeles Metro Bus Data Analysis Using GPS Trajectory and Schedule Data (Demo Paper). In *Proceedings of the 26th ACM SIGSPATIAL international conference on advances in geographic information systems*, pp. 560 – 563, Seattle, WA, USA
- Lin, Y.**, Chiang, Y.-Y., Pan, F., Stripelis, D., Ambite, J. L., Eckel, S. P. and Habre, R. (2017). Mining Public Datasets for Modeling Intra-City PM2.5 Concentrations at a Fine Spatial Resolution. In *Proceedings of the 25th ACM SIGSPATIAL international conference on advances in geographic information systems*, Article No. 25, Redondo Beach, CA, USA

## **Working Experience**

Research Intern, Mentor: **John Krumm**, Microsoft Corporation, May. 2020 - Aug. 2020

Research Programmer, Spatial Sciences Institute (SSI), USC, Nov. 2017 - Aug. 2018

## **Presentations<sup>1</sup>**

SynMap: A Synthetic Dataset for Text Spotting in Scanned Historical Maps. **Lin, Y.**, Kim, J., Li, Z., Chiang, Y.-Y. *GeoAI and Deep Learning Symposium: GeoAI for Feature Detection and Recognition*, AAG, 2023

The mapKurator System: Extracting and Linking Text from Large Numbers of Historical Map Scans. Jang, L., Kim, J., Namgung, M., Shrotriya, T., **Lin, Y.**, Li, Z., Chiang, Y.-Y. *Machines Reading Maps Summit*, Stanford, 2023

Guest Speaker, Mining Public Online Data for Fine-Scale Air Quality Prediction, *USC SSCI680 Advanced Spatial Computing*, 2019 Fall

Guest Speaker, Recommendation System and Spatial Data Visualization, *Soongsil University Visit*, 2019 Summer

## **Professional Services**

### Teaching Assistant

2023 Spring	UMN Introduction to Data Mining (graduate level)
2022 Fall	UMN Practice of Database Systems (undergraduate level)
2022 Spring	UMN Spatial AI (graduate level)
2019 - 2021	USC Foundations and Applications of Data Mining (graduate level)

### Conference Peer-Review

2024	Pacific-Asia Conference on Knowledge Discovery and Data Mining
2019 – 2022	ACM SIGSPATIAL International Conference on Advances in Geographic Information Systems
2022 - 2024	SIAM International Conference on Data Mining
2021 - 2024	International Workshop on Health Intelligence
2021 - 2024	International Workshop on Health Intelligence
2017 - 2022	IEEE International Conference on Tools with Artificial Intelligence
2021	International Workshop on Methods, Models, and Resources for Geospatial Knowledge Graphs and GeoAI
2020	International Conference on Artificial Intelligence in Medicine

### Journal Review

GeoInformatica

Atmospheric Pollution Research

Environmental Technology & Innovation

International Journal of Applied Earth Observation and Geoinformation

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<sup>1</sup> The presentations with peer-reviewed publications are in the section of Publications.

