

# Chia-Hsuan Chang

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## PROFESSIONAL APPOINTMENTS

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**Yale University, Department of Biomedical Informatics & Data Science**

Postdoctoral Associate

Supervisor: Dr. Hua Xu

New Haven, CT, USA

Nov. 2024 – Present

**Drexel University, College of Computing and Informatics**

Postdoctoral Researcher

Supervisor: Dr. Christopher C. Yang

Philadelphia, PA, USA

Feb. 2023 – Oct. 2024

## EDUCATION

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**National Sun Yat-Sen University**

Ph.D. in Information Systems

Dissertation: A Study on Text Analysis Across Languages

Advisor: Dr. San-Yih Hwang

Kaohsiung, Taiwan

Sept. 2016 – July 2021

**National Sun Yat-Sen University**

B.B.A. & M.B.A. in Information Systems

Kaohsiung, Taiwan

Sept. 2011 – June 2016

## PUBLICATIONS

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1. Lee, Y., **Chang, C. H.**, & Yang, C. C. (2025). Enhancing Patient-Physician Communication: Simulating African American Vernacular English in Medical Diagnostics with Large Language Models. *Journal of Healthcare Informatics Research*, 1-35.
2. Shang, K., **Chang, C.H.**, Yang, C.C. (2025). Collaboration among Multiple Large Language Models for Medical Question Answering. Accepted to *2025 IEEE 13th International Conference on Healthcare Informatics (ICHI)*.
3. **Chang, C. H.**, Tsai, J. T., Tsai, Y. H., & Hwang, S. Y. (2025). LITA: An Efficient LLM-assisted Iterative Topic Augmentation Framework. Accepted to *29th Pacific-Asia Conference on Knowledge Discovery and Data Mining (PAKDD)*.
4. **Chang, C. H.**, Huang, T. Y., Tsai, Y. H., Chang, C. M., & Hwang, S. Y. (2025). Refining Dimensions for Improving Clustering-based Cross-lingual Topic Models. In *Proceedings of the 18th Workshop on Building and Using Comparable Corpora (BUCC)* (pp. 46–56). Association for Computational Linguistics.
5. Wang, X., **Chang, C. H.**, & Yang, C. C. (2024). Achieving Equity via Transfer Learning with Fairness Optimization. *IEEE Access*, 12, 195229–195241
6. **Chang, C. H.**, Lucas, M. M., Lee, Y., Yang, C. C., & Lu-Yao, G. (2024). Beyond Self-consistency: Ensemble Reasoning Boosts Consistency and Accuracy of LLMs in Cancer Staging. In *International Conference on Artificial Intelligence in Medicine* (pp. 224–228). Cham: Springer Nature Switzerland.
7. **Chang, C. H.**, Wang, X., & Yang, C. C. (2024). Explainable AI for Fair Sepsis Mortality Predictive Model. In *International Conference on Artificial Intelligence in Medicine* (pp. 267–276). Cham: Springer Nature Switzerland.

8. **Change, C. H.**, Lucas, M. M., Lu-Yao, G., & Yang, C. C. (2024). Classifying Cancer Stage with Open-Source Clinical Large Language Models. In *2024 IEEE 12th International Conference on Healthcare Informatics (ICHI)* (pp. 76-82). IEEE.
9. Lucas, M. M., Wang, X., **Chang, C. H.**, Yang, C. C., Braughton, J. E., & Ngo, Q. M. (2024). An ExplainableFair Framework for Predictive Modeling in Healthcare. In *2024 IEEE 12th International Conference on Healthcare Informatics (ICHI)* (pp. 157-166). IEEE.
10. **Chang, C. H.**, Wang, L., & Yang, C. C. (2024). Constructing Cross-lingual Consumer Health Vocabulary with Word-Embedding from Comparable User Generated Content. In *2024 IEEE 12th International Conference on Healthcare Informatics (ICHI)* (pp. 275-284). IEEE.
11. **Chang, C. H.**, & Yang, C. C. (2023). On Bridging Consumer Health Search across Languages using Cross-lingual Word Space. *Electronic Commerce Research and Applications*, 59, 101254.
12. Lucas, M. M., **Chang, C. H.**, & Yang, C. C. (2023). Resampling for Mitigating Bias in Predictive Model for Substance Use Disorder Treatment Completion. In *2023 IEEE International Conference on Healthcare Informatics* (pp. 709-711). IEEE.
13. **Chang, C. H.**, Chang, F. Y., & Hwang, S. Y. (2023). Prompting for Few-shot Adverse Drug Reaction Recognition from Online Review. In *2023 IEEE International Conference on Healthcare Informatics (ICHI)* (pp. 168-175). IEEE.
14. Monselise, M., **Chang, C. H.**, Ferreira, G., Yang, R., & Yang, C. C. (2021). Topics and Sentiments of Public Concerns Regarding COVID-19 Vaccines: Social Media Trend Analysis. *Journal of Medical Internet Research*, 23(10), e30765.
15. **Chang, C. H.**, & Hwang, S. Y. (2021). A Word Embedding-based Approach to Cross-lingual Topic Modeling. *Knowledge and Information Systems*, 63(6), 1529-1555.
16. **Chang, C. H.**, Hwang, S. Y., & Wu, M. L. (2021). Learning Bilingual Sentiment Lexicon for Online Reviews. *Electronic Commerce Research and Applications*, 47, 101037.
17. **Chang, C. H.**, Monselise, M., & Yang, C. C. (2021). What Are People Concerned About During the Pandemic? Detecting Evolving Topics about COVID-19 from Twitter. *Journal of Healthcare Informatics Research*, 5(1), 70-97.
18. Chang, C. M., **Chang, C. H.**, & Hwang, S. Y. (2020). Employing Word Mover's Distance for Cross-lingual Plagiarized Text Detection. *Proceedings of the Association for Information Science and Technology*, 57(1), e229.
19. **Chang, C. H.**, Wu, M. L., & Hwang, S. Y. (2019). An Approach to Cross-lingual Sentiment Lexicon Construction. In *2019 IEEE International Congress on Big Data (BigDataCongress)* (pp. 129-131). IEEE.
20. **Chang, C. H.**, Hwang, S. Y., & Xui, T. H. (2018). Incorporating Word Embedding into Cross-lingual Topic Modeling. In *2018 IEEE International Congress on Big Data (BigData Congress)* (pp. 17-24). IEEE.

## **PROFESSIONAL SERVICE**

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2025	<b>Reviewer</b> , ACM SIGKDD Conference on Knowledge Discovery and Data Mining
2024	<b>Reviewer</b> , IEEE International Conference on Healthcare Informatics (ICHI)
2023, 2024	<b>Reviewer</b> , IEEE Transactions on Knowledge and Data Engineering (TKDE)
2023, 2024	<b>Reviewer</b> , Knowledge and Information Systems (KAIS)
2023, 2024	<b>Reviewer</b> , Journal of Healthcare Informatics Research (JHIR)
2023	<b>Reviewer</b> , International Journal of Data Science and Analytics (JDAS)

## **AWARD AND HONOR**

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2021	<b>Exceptional Doctoral Dissertation</b> , National Sun Yat-Sen University
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2021	<b>Honorary Member</b> , The Phi Tau Phi Scholastic Honor Society of the Republic of China
2020	<b>Fellowship</b> , TWD 900,000 from Graduate Students Study Abroad Program, Ministry of Science and Technology, Taiwan
2016-2020	<b>Industry-Academy Cooperation Scholarship</b> , TWD 1,200,000 for four years, Ministry of Education, Taiwan
2016-2018	<b>PhD Two-Year Scholarship</b> , TWD 684,000 for two years, National Sun Yat-Sen University
2015-2016	<b>Five-Year BA-MA Program Scholarship</b> , TWD 120,000 for one year, National Sun Yat-Sen University

## **SKILLS**

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**Programming Languages:** Python, R, Java, Bash, SQL, HTML/CSS/JS, LaTeX

**Tools:** Linux, Git, Docker, Slurm, Spacy (sciSpacy), LangChain, HuggingFace Transformers, PyTorch, Keras, Milvus, MongoDB, MySQL, Universal Medical Language System (UMLS)

**Language Skills:** Mandarin (Native), English (Excellent)