

Chia-Hsuan Chang

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EDUCATION

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

Drexel University, College of Computing and Informatics

Visiting Ph.D. Student

Supervisor: Dr. Christopher C. Yang

Philadelphia, USA

Feb. 2020 – Feb. 2021

National Sun Yat-Sen University

M.B.A. in Information Systems

Kaohsiung, Taiwan

Sept. 2015 – June 2016

National Sun Yat-Sen University

B.B.A. in Information Systems

Kaohsiung, Taiwan

Sept. 2011 – June 2014

PROFESSIONAL EXPERIENCE

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

National Sun Yat-Sen University, Department of Information Management

Postdoctoral Researcher

Supervisor: Dr. San-Yih Hwang

Kaohsiung, Taiwan

Oct. 2022 – Jan. 2023

PUBLICATIONS

Journal Articles

- [J01] Wang, X., **Chang, C. H.**, & Yang, C. C. (2024). Achieving Equity via Transfer Learning with Fairness Optimization. (Under Review)
- [J02] Lee, Y., **Chang, C. H.**, & Yang, C. C. (2024). Simulating African American Vernacular English in Medical Diagnostics with Large Language Models. (Under Review)
- [J03] **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.
- [J04] 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.

- [J05] **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.
- [J06] **Chang, C. H.**, Hwang, S. Y., & Wu, M. L. (2021). Learning Bilingual Sentiment Lexicon for Online Reviews. *Electronic Commerce Research and Applications*, 47, 101037.
- [J07] **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.

Conferences/Oral Presentations

- [C01] **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.
- [C02] **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.
- [C03] **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.
- [C04] 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.
- [C05] **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.
- [C06] 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.
- [C07] **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.
- [C08] 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.
- [C09] **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.
- [C10] **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

- 2023, 2024 **Reviewer**, IEEE Transactions on Knowledge and Data Engineering (TKDE)
- 2023, 2024 **Reviewer**, Knowledge and Information Systems (KAIS)
- 2023, 2024 **Reviewer**, Journal of Healthcare Informatics Research (JHIR)
- 2023 **Reviewer**, International Journal of Data Science and Analytics (JDSA)

AWARD AND HONOR

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

SKILLS

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

OS/Software/Framework: Linux, Git, Docker, Spacy, LangChain, HuggingFace Transformers, PyTorch, Keras, MongoDB, Chroma DB, MySQL

Medical Language Processing: Universal Medical Language System (UMLS), sciSpacy

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