


Chia-Hsuan Chang

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EDUCATION

- National Sun Yat-Sen University** Kaohsiung, Taiwan
Ph.D. in Information Systems Sept. 2016 – July 2021
Dissertation: A Study on Text Analysis Across Languages
Advisor: Dr. San-Yih Hwang
- National Sun Yat-Sen University** Kaohsiung, Taiwan
M.B.A. in Information Systems Sept. 2015 – June 2016
- National Sun Yat-Sen University** Kaohsiung, Taiwan
B.B.A. in Information Systems Sept. 2011 – June 2014

PUBLICATIONS

Journal Articles

- 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.
- 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.
- Chang, C. H.**, Hwang, S. Y., & Wu, M. L. (2021). Learning bilingual sentiment lexicon for online reviews. *Electronic Commerce Research and Applications*, 47, 101037.
- 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

- 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.
- Chang, C. H.**, Wu, M. L., & Hwang, S. Y. (2019, July). An approach to cross-lingual sentiment lexicon construction. In *2019 IEEE International Congress on Big Data (BigDataCongress)* (pp. 129-131). IEEE.
- Chang, C. H.**, Hwang, S. Y., & Xui, T. H. (2018, July). Incorporating word embedding into cross-lingual topic modeling. In *2018 IEEE International Congress on Big Data (BigData Congress)* (pp. 17-24). IEEE.

RESEARCH

- Drexel University, College of Computing and Informatics** Philadelphia, USA
Visiting Ph.D. Student Feb. 2020 – Feb. 2021
 - Proposed a learning framework to extract cross-lingual consumer health vocabulary from online health forums
 - Designed temporal topic models for extracting hidden topics from large-scale COVID-19 related tweets
- National Sun Yat-Sen University, Dept. Information Management** Kaohsiung, Taiwan
Ph.D. Researcher Sept. 2016 – July 2021
 - Proposed a framework of cross-lingual sentiment lexicon construction to extend lexicons for the language

- with less resources from those lexicons available in other languages
 - Designed a cross-lingual topic model for the scenario with limited bilingual resources
 - Investigated deep learning techniques in representation learning, text classification, and topic modeling
- **National Sun Yat-Sen University, Dept. Information Management** Kaohsiung, Taiwan
Graduate Researcher Sept. 2015 – June 2016
 - Developed a social listening framework, which monitors several news publishers and social media for supporting companies to conduct business strategies
 - Built a natural language processing web application for academic researchers in business/political domain
 - Investigated musical information retrieval systems for finding quality chord tabs from large manual-annotated contents

INDUSTRY

- **Metal Industries Research & Development Centre.** Kaohsiung, Taiwan
Visiting Ph.D. Student Sept. 2016 – Sept. 2020
 - Designed a social monitoring platform, which aims to predict future trends in metal industry using news, patent documents, and technical reports
 - Provided consultancy about deep learning techniques and application to the RD team
- **iGroup Asia Pacific Ltd.** Kaohsiung, Taiwan
Machine Learning Engineer Oct. 2018 – Feb. 2019
 - Performed text analysis on publications of chemical journals
 - Built an information retrieval system for National Institute for Materials (NIMS) using topic model, word representation learning, and document presentation learning
- **Advanced Semiconductor Engineering, Inc.** Kaohsiung, Taiwan
Graduate Researcher Feb. 2015 – Aug. 2017
 - Collected textual data from the web and built the MongoDB for persisting data
 - Developed a Chinese social listening system using sentiment analysis, topic model, and Hashing-based approximate nearest neighbor search algorithms

AWARDS AND HONORS

- 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**, NT 900,000 from Graduate Students Study Abroad Program, Ministry of Science and Technology, Taiwan

SKILLS

- **Technical Skills:**
Programming Languages: Python, R, Julia, Java, Bash, SQL, HTML/CSS/JS, LaTeX
 - Tools: PyTorch, Keras, Tensorflow, MySQL, MongoDB, Linux, Docker, Git
- **Language Skills:** Mandarin (Native), English (Excellent)