Lu He

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6136 Donald Bren Hall,
University of California, Irvine

Research Interests

Health informatics, human-computer interaction, natural language processing, social media mining

Education

2017 – present **Ph.D., University of California,Irvine** in Informatics
Advisor: Kai Zheng

2013 – 2017 **B.S., University of Minnesota, Twin Cities** in Computer Science.
With Distinction

Experience

2017 – present **Graduate Research Assistant**
Department of Informatics
University of California, Irvine
Advisor: Kai Zheng, Ph.D.
Project 1: Conducted systematic literature reviews on the use of computational tools for healthcare social media studies. Empirically evaluated the validity of tools. Paper published as [C1].
Project 2: Characterized emergency department frequent attenders using cluster analysis. Paper published as [C2].

Summer 2018 **Bioinformatics Programmer**
Bakar Computational Health Sciences Institute
University of California, San Francisco
Supervisor: Gundolf Schenk, Ph.D.
Project: Developed test unites for a program to identify Protected Health Information (PHI) in clinical notes. Improved the performance of the program to be able to run on 60 million notes.

2016-2017 **Undergraduate Research Assistant**
Institute for Health Informatics
University of Minnesota, Twin Cities
Advisor: Chih-Lin Chi, Ph.D.
Project: Developed decision tree models for personalized warfarin treatments. Paper published as [C3].

Undergraduate Research Assistant
Institute for Health Informatics
University of Minnesota, Twin Cities
Advisor: Rui Zhang, Ph.D.
Project: Developed rule-based and machine learning models to extract supplement use status in clinical notes. Papers published as [C4,C5].

Undergraduate Research Assistant
Department of Computer Science and Engineering
University of Minnesota, Twin Cities
Advisor: Svetlana Yarosh, Ph.D.
Project: Performed sentiment analysis on journals from an online health community. Paper published as [J1].

Research Publications

Journal Articles

1. Ma, H., Smith, C. E., **He**, **L.**, Narayanan, S., Giaquinto, R. A., Evans, R., … Yarosh, S. (2017, December). Write for life: persisting in online health communities through expressive writing and social support. *Proc. ACM Hum.-Comput. Interact. 1*(CSCW), 73:1–73:24. doi:10.1145/3134708

Conference Proceedings

1. **He**, **L.** & Zheng, K. (2019, forthcoming). How do general-purpose sentiment analyzers perform when applied to health-related online social media data? In *2019 world congress on health and biomedical informatics (medinfo '19)*.
2. Shehada, E. R., **He**, **L.**, Eikey, E., Jen, M., Wong, A., Young, S., & Zheng, K. (2019, forthcoming). Characterizing frequent flyers of an emergency department using cluster analysis. In *2019 world congress on health and biomedical informatics (medinfo '19)*.
3. Chi, C.-L., **He**, **L.**, Kourosh, R., Weissert, J., & Tonellato, P. J. (2018). Using simulation and optimization approach to improve outcome through warfarin precision treatment. In *Pac symp biocomput* (Vol. 23, pp. 412–423).
4. Fan, Y., **He**, **L.**, & Zhang, R. (2017, November). Evaluating automatic methods to extract patients' supplement use from clinical reports. In *2017 ieee international conference on bioinformatics and biomedicine (bibm)* (pp. 1258–1261). doi:10.1109/BIBM.2017.8217839
5. Fan, Y., **He**, **L.**, Serguei, P. V., B, G. M., & Zhang, R. (2017). Classifying Supplement Use Status in Clinical Notes. In *Amia jt summits transl sci proc* (Vol. 2017, pp. 493–501).

Teaching

University of California, Irvine

2018 Graduate Teaching Assistant, IN4MTX 151 (Project Management).

University of Minnesota, Twin Cities

2016–2017 Undergraduate Teaching Assistant, CSci 1913 (Introduction to Algorithms and Data Structures).

Scholarships and Awards

University of California, Irvine

2018 CRA-W Grad Cohort Workshop, Computing Research Association.

2017 Graduate Dean Recruitment Fellowship, Department of Informatics.

Dean's Award, Department of Informatics.

University of Minnesota, Twin Cities

2013–2017 Maroon Global Excellence Scholarship.

2014 Undergraduate Special Recognition, Department of German, Nordic, Slavic and Dutch,

2013–2016 Dean's List

Skills

Research methods	Qualitative (interviews, wizard-of-oz, user testing), Quantitative (applied machine learning, natural language processing, social network analysis)
Languages	Mandarin Chinese (Native), English (Full professional proficiency), Japanese (JLPT N3), German (Limited proficiency)
Coding	Python (proficient), Java (medium), R (medium), Matlab (medium), SQL (medium), LaTeX.
Packages and Frameworks	Python (SciPy, NumPy, Pandas, NLTK, Spacy, gensim, scikit-learn) R (ggplot, tidyverse, tidytext)
Databases	MySQL, PostgreSQL.

Services

Reviwer	AMIA 2018-2019
Volunteer	AMIA 2018 Student Volunteer

Talks and Presentations

Talks	"Characterizing Frequent Users of Emergency Department Using Cluster Analysis", Medical Intelligence and Innovation Institute (MI3), Childrens Hospital of Orange County (CHOC), Orange, CA, April 8, 2019

Mentoring

Daniel Davies (Undergraduate, UCI)