

Curriculum Vitae

Lingshu HU Ph.D.**Assistant Professor of Business Administration and Data Science****Washington and Lee University**

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ACADEMIC APPOINTMENTS

| | |
|---|----------------------|
| Washington and Lee University, | Lexington, VA |
| <i>The Williams School of Commerce, Economics, and Politics</i> | |
| Assistant Professor of Business Administration (Data Analytics) | Spet. 2021–Present |
| <i>The College</i> | |
| Core Faculty of Data Science | Spet. 2022–Present |
| INFORMS Annual Meeting Social Media Analytics Section | |
| Vice President | Jan. 2024–present |

EDUCATION

| | |
|--|---------------------|
| University of Missouri | Columbia, MO |
| <i>Department of Electrical Engineering & Computer Science</i> | |
| Ph.D. in Computer Science (AI and Machine Learning) | Aug. 2022–present |
| <ul style="list-style-type: none">Advisor: Dr. Yi Shang shangy@missouri.edu (573) 884-7794 | |
| M.S. in Computer Science (AI and Machine Learning) | June 2021–May 2022 |
| <ul style="list-style-type: none">Advisor: Dr. Yi Shang shangy@missouri.edu (573) 884-7794Thesis Title: Performance Evaluation of Text Augmentation Methods with BERT on Imbalanced DatasetsQualified for membership in Upsilon Pi Epsilon (UPE), the International Honor Society for the Computing and Information Disciplines. | |
| Graduate Certificate in AI and Machine Learning | Aug. 2018–July 2021 |
| <i>School of Journalism</i> | |
| Ph.D. in Journalism (Computational Methods) | Aug. 2017–July 2021 |
| <ul style="list-style-type: none">Advisor: Dr. Michael W. Kearney kearneymw@missouri.edu (573) 882-0424 | |

- Committee: Dr. Glen T. Cameron; Dr. Shuhua Zhou; Dr. Kennon M. Sheldon (Psychology); Dr. Jianlin Cheng (Computer Science)
- Dissertation Topic: Using Communicative Patterns to Predict Twitter Users' Social Capital, Likability, and Popularity Gains with Natural Language Processing (Top Dissertation in 2021 at the School of Journalism, University of Missouri)
- Qualified for membership in Kappa Tau Alpha (KTA), the national honor society in journalism and mass communication.

London School of Economics and Political Science,***Gender Institute*****London, UK**

M.S. in Gender, Media and Culture

Oct. 2011–Sep. 2012

- Advisor: Dr. Sadie Wearing
- Thesis Title: Changes of Chinese Masculinity: An exploration of changes in the portrayal of men and masculinity in Chinese film posters from 1949 to 2011.

Communication University of Zhejiang (Former Name: Zhejiang University of Media and Communications),***School of Journalism & Communications*****Hangzhou, China**

B.A. in Broadcast Journalism

Sept. 2006–June 2010

RESEARCH RECORD

A. Journal Articles

- Hu, L.** (2024). Mobilization, Self-Expression, or Argument? Identifying Language Styles in Political Discussion on Twitter with Cluster Analysis. *Online Information Review*. <https://doi.org/10.1108/OIR-10-2022-0545> (IF: 3.3)
- Hu, L.** (2023). A two-step method for classifying political partisanship using deep learning models. *Social Science Computer Review*. <https://doi.org/10.1177/08944393231219685> (IF: 4.7)
- Xu, M., **Hu, L.**, & Hinnant, A. (2023). Pseudo-events: Tracking mediatization with machine learning over 40 years. *Computers in Human Behavior*, 144, 107735. <https://doi.org/10.1016/j.chb.2023.107735> (IF: 9.9)
- Xu, M., **Hu, L.**, & Cameron, G. T. (2023). Tracking moral divergence with DDR in presidential debates over 60 Years. *The Journal of Computational Social Science*, 6, 339–357. <https://doi.org/10.1007/s42001-023-00198-8> (IF: 3.2)

- Zhang, W., **Hu, L.**, & Park, J. (2022). Politics go “viral”: A computational text analysis of crisis attribution regarding the COVID-19 pandemic. *Social Science Computer Review*, 41(3), 790–811. <https://doi.org/10.1177/08944393211053743> (IF: 4.7)
- Hu, L.**, Kearney, M. W., & Frisby, C. M. (2021). Tweeting and retweeting: Gender discrepancies in discursive political engagement and influence on Twitter. *Journal of Gender Studies*, 32(5), 441–459. <http://dx.doi.org/10.1080/09589236.2021.1995340> (IF: 2.2; Q1)
- Hu, L.** (2021). Self as brand and brand as self: A 2x2 dimension conceptual model of self-branding in the digital economy. *Journal of Internet Commerce*, 20(3), 355–370. <http://dx.doi.org/10.1080/15332861.2021.1907170> (IF: 4.8)
- Hu, L.**, & Kearney, M. W. (2021). Gendered tweets: Computational text analysis of gender differences in political discussions on Twitter. *Journal of Language and Social Psychology*, 40(4), 482–503. <https://doi.org/10.1177/0261927X20969752> (IF: 2.4)
- Hu, L.** (2018) Is masculinity ‘deteriorating’ in China? Changes of masculinity representation in Chinese film posters from 1951 to 2016. *Journal of Gender Studies*, 27(3), 335–346. <https://doi.org/10.1080/09589236.2017.1399867> (IF: 2.2; Q1)
- Hu, L.** (2016) Communication effects of data journalism on Weibo (microblog). *Editorial Friend* (2), 70–74. (In Chinese)
- He, L., **Hu, L.**, Li, W., & Zhang, Z. (2016). Title attractors and negative energy: Language style analysis of organizational media’s official accounts on WeChat. *The Press* (13), 42–47. (In Chinese)

B. Refereed Conference Proceedings

- Wang, W., Li, C., **Hu, L.**, Pang, B., Balducci, B., Marinova, D., Gordon, M., & Shang, Y. (2024). Recognizing and Predicting Business Communication Outcomes Using Local LLMs. *The Proceedings of the 2024 IEEE International Conference on Information Reuse and Integration for Data Science (IRI)*.
- Li, C., Pang, B., Wang, W., **Hu, L.**, Gordon, M., Marinova, D., Balducci, B., & Shang, Y. (2023). How Well Can Language Models Understand Politeness? *The Proceedings of the 2023 IEEE Conference on Artificial Intelligence*. <https://doi.org/10.1109/CAI54212.2023.00106>
- Hu, L.**, Li, C., Wang, W., Pang, Bin., & Shang, Y. (2022). Performance Evaluation of Text Augmentation Methods with BERT on Small-sized, Imbalanced Datasets. *The Proceedings of the 2022 IEEE International Conference on Cognitive Machine Intelligence (CogMI)*. <https://doi.org/10.1109/CogMI56440.2022.00027>

Li, C., Wang, W., Balducci, B., **Hu, L.**, Gordon, M., Marinova, D., and Shang, Y. (2022). Deep Formality: Sentence Formality Prediction with Deep Learning. *The Proceedings of the 2022 IEEE International Conference on Information Reuse and Integration for Data Science (IRI)*. <https://doi.org/10.1109/IRI54793.2022.00014>

C. Edited Book Chapter

He, L., **Hu, L.**, & Yu, L. (2016). The communication features and the psychological mechanism of rumors on WeChat. In X. Tang, X. Wu, and C. Huang (Eds.), *Annual Report on Development of New Media in China (No.7)* (pp. 102-118). Social Science Academic Press. (In Chinese)

D. Conference Presentations

Hu, L., Sheldon, K., & Sun, R. (2024, October 20–23). *Investigating the Cumulative and Curvilinear Impact of Politicians' Negative Expressions on Twitter*. Paper accepted for presentation at the 2024 INFORMS Annual Meeting, Seattle, WA.

Hu, L., & Zhang, W. (2023, October 15–18). *Examining the Effects of Firms' DEI Tweets with Deep Learning*. Paper presented at the 2023 INFORMS Annual Meeting, Phoenix, AZ.

Dirk, L., Wang, T., Yang, X., & **Hu, L.** (2023, August 4–8). *Top entrepreneurship research in the past 20 years: Topics and impacts*. Paper presented at the 83rd Annual Meeting of the Academy of Management, Boston, MA.

Wang, T., Dirk, L., **Hu, L.**, & Yang, X. (2023, June 7–10). *The Intellectual Structure of The Entrepreneurship Field and The Diffusion of Entrepreneurship Research in Mainstream Top Management Journals*. Paper presented at the 43rd Babson College Entrepreneurship Research Conference, Knoxville, TN.

Hu, L. (2022, November 12). *Using Communicative Patterns to Predict Twitter Users' Social Capital Gains with Natural Language Processing*. The International Conference on Digital Communication and Cross-Cultural Communication. Tongxiao, China.

Xu, M., **Hu, L.**, & Hinnant, A. (2022, October 19–22). *Tracking Mediatization with a Machine Learning Classifier of Pseudo-Events*. Paper presented at the 9th European Communication Conference, Aarhus, Denmark.

Hu, L. (2022, May 26–30). *A Two-Step Method to Classify Political Partisanship Using a Deep Learning Model*. Paper presented at the 72nd ICA Annual Conference, Paris, France.

- Xu, M., **Hu, L.**, & Hinnant, A. (2022, May 26–30). *Pseudo-Events: Tracking Mediatization With Machine Learning Over 40 Years*. Paper presented at the 72nd ICA Annual Conference, Paris, France.
- Hu, L.** (2021, August 4–7). *I, We, You, or They? Language Styles in Political Discussion on Twitter*. Paper presented at the 2021 AEJMC Annual Conference, Virtual.
- Hu, L.** (2021, August 4–7). *Boosting Texts: Improving Text Classification Performance on Small-Sized, Imbalanced Datasets*. Paper presented at the 2021 AEJMC Annual Conference, Virtual.
- Xu, M., & **Hu, L.** (2021, August 4–7). *Tracking Moral Divergence with DDR in Presidential Debates Over 60 Years*. Paper presented at the 2021 AEJMC Annual Conference, Virtual.
- Hu, L.**, & Sheldon, K. (2021, May 27–31). *Negativity is not Always Negative: Positive Effects of Negative Expression on Twitter*. Paper presented at the 71th ICA Annual Conference, Virtual.
- Zhang, W., **Hu, L.**, & Park, J. (2020, August 6–9). *When Virus Goes Political: A Computerized Text Analysis of Crisis Attribution on COVID-19 Pandemic*. Paper presented at the 103rd AEJMC Annual Conference, Virtual.
- Hu, L.**, & Frisby, C. M. (2020, May 20–27). *Reconstruct the “Spiral”: Positive and Negative Motivations Predicting Outspokenness in Online and Offline Scenarios*. Paper presented at the 70th ICA Annual Conference, Virtual.
- Hu, L.**, & Kearney, M. W. (2020, May 20–27). *Gendered Tweets: Text Analysis of Gender Differences in Political Discussions on Twitter*. Paper presented at the 70th ICA Annual Conference, Virtual.
- Hu, S., & **Hu, L.** (2020, May 20–27). *Predictors of Perceived Information Credibility in an Online Health Forum: A Computerized Content Analysis of Big Dataset*. Paper presented at the 70th ICA Annual Conference, Virtual.
- Kearney, M. W., **Hu, L.**, & Alieva, I. (2019, August 7–10). *Classifying Twitter Bots*. Paper presented at the 102nd AEJMC Annual Conference, Toronto, Canada.
- Hu, L.**, & Frisby, C. M. (2019, May 24–28). *Outside the “Spiral”: Factors Predicting Outspokenness in Online and Offline scenarios*. Paper presented at the 69th ICA Annual Conference, Washington, DC.
- Abeyta, A., Alieva, I., Park, J., Warner, B. R., **Hu, L.**, & Kearney, M. W. (2019, April 3–7). *Analyzing Tweets from Candidates for the U.S. Congress in the 2018 U.S. Midterm Elections*. Paper presented at the 88th Annual Meeting of Central States Communication Association, Omaha, NE.

Hu, L., & Kearney, M. W. (2018, August 6–9). *Speaking in a woman's name: Gender difference of political expressive participation on Twitter*. Paper presented at the 101st AEJMC Annual Conference, Washington, DC.

E. Media Appearances

Doctor-E (Tencent Research Center). (2020). Whether twitter users appreciate Chinese aids for COVID-19. Retrieved from <https://mp.weixin.qq.com/s/tyfsxBJQ1HVJVfn848LxJA> (In Chinese).

CCTV News Center. (2016). WeChat exceeds Weibo in misinformation spreading. Retrieved from <https://www.jfdaily.com/news/detail?id=21541> (In Chinese).

People.cn. (2016). Rumor analysis for WeChat official accounts: Annual data report (2016). Retrieved from <http://society.people.com.cn/n1/2016/0408/c1008-28262054.html> (In Chinese).

Beijing Daily. (2016). Rumor analysis for WeChat official accounts: Annual data report (2016). Retrieved from http://www.cac.gov.cn/2016-04/03/c_1118522878.htm (In Chinese).

SOFTWARE DEVELOPMENT

Hu, L. (2023). PolitiClassify: A Python package for classifying Twitter users' political orientation using two-step deep learning models (Version 0.1.6) [Python package]. <https://github.com/LingshuHu/PolitiClassify>

Hu, L., & Kearney, M. W. (2019). healthforum: Scrape Patient Forum Data (Version 0.1.0) [R package]. CRAN. <https://CRAN.R-project.org/package=healthforum>

Kearney, M. W., & Hu, L. (2019). wactor: Word Factor Vectors (Version 0.0.1) [R package]. CRAN. <https://CRAN.R-project.org/package=wactor>

Kearney, M. W., Hu, L., & Alieva, I. (2019). ppcong: Interfacing with ProPublica's 'Congress' API (Version 0.0.2) [R package]. CRAN. <https://CRAN.R-project.org/package=ppcong>

Kearney, M. W., Hvitfeldt, E., & Hu, L. (2019). textfeatures: Extracts Features from Text (Version 0.3.3) [R package]. CRAN. <https://CRAN.R-project.org/package=textfeatures>

TEACHING RECORD

A. List of Courses

| | |
|--|------------------|
| Instructor of Record BUS 306D User Generated Content: Analytics and Insights Washington and Lee University, The Williams School | Spring 2023–2024 |
| <ul style="list-style-type: none">• Enrollment: 17 | |
| Instructor of Record BUS 306A Applied AI and Machine Learning Washington and Lee University, The Williams School | Winter 2023–2024 |
| <ul style="list-style-type: none">• Enrollment: 17 | |
| Instructor of Record BUS 202 Fundamentals of Business Analytics Washington and Lee University, The Williams School | Winter 2023–2024 |
| <ul style="list-style-type: none">• Enrollment: 35 | |
| Instructor of Record BUS 202 Fundamentals of Business Analytics Washington and Lee University, The Williams School | Fall 2023–2024 |
| <ul style="list-style-type: none">• Enrollment: 36 | |
| Instructor of Record INTR 202 Applied Statistics Washington and Lee University, The Williams School | Winter 2022–2023 |
| <ul style="list-style-type: none">• Enrollment: 53 | |
| Instructor of Record BUS 306A Applied AI and Machine Learning Washington and Lee University, The Williams School | Fall 2022–2023 |
| <ul style="list-style-type: none">• Enrollment: 13 | |
| Instructor of Record INTR 202 Applied Statistics Washington and Lee University, The Williams School | Fall 2022–2023 |
| <ul style="list-style-type: none">• Enrollment: 17 | |
| Instructor of Record INTR 202 Applied Statistics Washington and Lee University, The Williams School | Winter 2021–2022 |
| <ul style="list-style-type: none">• Enrollment: 35 | |
| Instructor of Record | Fall 2021–2022 |

INTR 202 Applied Statistics

Washington and Lee University, The Williams School

- Enrollment: 37

Teaching Assistant (Grading and Lecturing)

Spring 2021

JOURN 4430/JOURN 7430 Computer-Assisted Reporting

University of Missouri, School of Journalism

- Enrollment: 22

Instructor of Record

Fall 2020

JOURN 1200 Fundamentals of Visual Journalism and Strategic Communication

University of Missouri, School of Journalism

- Enrollment: 19

Teaching Assistant (Grading and Lecturing)

Spring 2020

JOURN 1200 Fundamentals of Visual Journalism and Strategic Communication

University of Missouri, School of Journalism

- Enrollment: 19

Co-Instructor (Instructing under Supervision)

Fall 2019

JOURN 2150 Fundamentals of Multimedia Journalism

University of Missouri, School of Journalism

- Enrollment: 57 (Three Sections)

Co-Instructor (Instructing under Supervision)

Spring 2019

JOURN 2150 Fundamentals of Multimedia Journalism

University of Missouri, School of Journalism

- Enrollment: 47 (Three Sections)

Teaching Assistant (Lecturing)

Fall 2018

JOURN 2150 Fundamentals of Multimedia Journalism

University of Missouri, School of Journalism

- Enrollment: 57 (Three Sections)

Part-Time Lecturer & Curriculum Advisor

March 2016–June 2017

New media editing and data journalism

Dongguan Polytechnic, Dongguan, China

B. Guest Speaker

Analyzing Non-Numerical Data with Machine Learning in Business

Feb. 2023

Diversified Capital Group

Washington and Lee University

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| Data Journalism and Computer Programming 2022 Grade of Students Chengdu University of Technology, China | Dec. 2022 |
| Data Analytics with AI and Machine Learning ISC361 Direct Response Targeting: Media and Database Management University of Kentucky | Nov. 2022 |
| Data Journalism and Computer Programming 2021 Grade of Students Communication University of China, China | Oct. 2021 |
| Data Analytics with NLP (And More) W&L student consulting Washington and Lee University | Oct. 2021 |
| Computational Methods and Big Data JMC 3350 Communication Research Method University of Nebraska Omaha, School of Communication | Spring 2021 |

RESEARCH & TEACHING SKILLS

- **Programming Skills: R (7 years), Python (6 years), SQL, HTML, CSS.**
Experience with developing **R packages** for data scraping and text vectorization.
Experience with applying **machine learning, deep learning,** and **NLP** to social science research.
- **Statistics Skills:** Experience with using Poisson regression, negative binomial regression, logistic regression, multilevel modeling, spline regression, SEM, cluster analysis, and time series analysis in research.
- **Multimedia Skills:** Experience with teaching Adobe Photoshop, Adobe InDesign, Adobe Premiere Pro, and Adobe Audacity.
- **Languages:** Chinese (native), English (proficient)

PROFESSIONAL EXPERIENCE

Editor & Data Journalist

Guangzhou Daily, Guangzhou, China

Aug. 2013–June 2017

- Editing, translating, and producing stories for *Guangzhou Daily News Application* and its official accounts on Micro blog and WeChat platforms.
- Data collecting, sorting, analyzing, and interpreting; coordinating with designers and programmers to produce data reports.

Intern Reporter

- Deyang TV Station, Deyang, China** Jan. 2010–Apr. 2010
- Assisting in searching background information to support news reporting.
 - Interviewing, video shooting, and news writing.

RESEARCH POSITIONS

- Research Assistant, Dr. Michael W. Kearney**
University of Missouri, School of Journalism Aug. 2017–May 2021
- Research Assistant, Dr. Cynthia M. Frisby**
University of Missouri, School of Journalism Aug. 2017–May 2018
- Part-Time Research Assistant, Dr. Lingnan He**
Sun Yat-Sen University, Lab for Big Data and Communication Mar. 2015–June 2017

ACADEMIC SERVICE

- Vice President of Social Media Analytics Division**
- INFORMS Annual Meeting Oct. 2023–present
- Job Search Committee**
- Assistant/Associate Professor of Business Administration (Data Analytics),
 Washington and Lee University Aug.–Dec. 2022
 - Assistant/Associate Professor of Business Administration (Data Analytics),
 Washington and Lee University Jan.–May 2022
- AI-Hub Committee**
- Washington and Lee University Sep. 2023–present
- Recruitment Ambassadors**
- Washington and Lee University Sep. 2023–present
- Public Functions Committee**
- Washington and Lee University Aug. 2022–Dec. 2023

Journal Reviewer

- *Social Science Computer Review* Nov. 2023–present
- *International Journal of Public Opinion Research* July 2023–present
- *Sustainability* Mar. 2023–present
- *Psychological Science* Dec. 2022–present
- *Electronics* Dec. 2022–present
- *Journalism and Media* Nov. 2022–present
- *The Chinese Journal of Comparative Law* June. 2022–present
- *Feminist Media Studies* Mar. 2022–present
- *Mass Communication and Society* Dec. 2021–present
- *International Journal of Communication* Sept. 2021–present
- *Human Communication Research* Sept. 2020–present
- *Journal of Language and Social Psychology* May 2020–present
- *Journal of Global Media and China* June 2019–present
- *Visual Communication Quarterly* Sept. 2018–present

Conference Paper Reviewer

- ICA Computational Methods Division Dec. 2019–present

Panel Speaker

- INTDSC 2001 Intro to Research, Fellowship & Discovery (MU) Spring 2021
- INTDSC 2001 Intro to Research, Fellowship & Discovery (MU) Fall 2020

Member of INFORMS June. 2023–present

Member of Academy of Management (AOM) Apr. 2023–Apr. 2024

Member of IEEE Nov. 2022–Nov. 2023

Member of ICA Computational Methods Division Mar. 2019–Apr. 2023

Staff of PCI (political communication institute at MU) Aug. 2018–present

Member of AEJMC June 2018–July 2022

GRANT, HONORS, & AWARDS**A. Grants**

- The VFIC Mednick Memorial Fellowship Grant** Sept. 2024
 - \$2,000

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| WLU Lenfest Research Grant | Sept. 2024 |
| • \$4,500 + \$2,000 | |
| WLU WLU Data Science Departmental Research Grant | May 2024 |
| • \$1,500 | |
| WLU Spring Term Course Enhancement Grant | May 2024 |
| • \$650 | |
| WLU MiniGrant | Jan.–Apr. 2024 |
| • \$450 | |
| WLU Lenfest Research Grant | Sept. 2023 |
| • \$4,500 + \$3,000 | |
| WLU Lenfest Research Grant | Sept. 2022 |
| • \$4,500 + \$3,000 | |
| WLU Summer Research Grant | Sept. 2021 |
| • \$7,500 | |
| Funded as Research Assistant | |
| Internal Funding for Big Data Research and Training, Columbia MO | June–July 2019 |
| • \$3,000 | |
| Funded as Research Assistant | |
| Graves Strategic Communication Faculty Facilitation Fund, Columbia MO | Apr. 2018 |
| • Survey for the “Spiral of Silence Study” \$2,500 | |

B. Awards & Scholarships

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| Top Dissertation | Sept. 2021 |
| School of Journalism, University of Missouri, U.S. | |
| Outstanding Graduate Student Teaching Assistant Award | May 2021 |
| Chinese Communication Association | |
| Donald S Mozley Scholarship | 2017–2020 |
| University of Missouri, U.S. | |
| Monthly News Reporting Awards | 2016–2017 |
| Guangzhou Daily, Guangzhou, China | |
| Award for Outstanding Graduates | June 2010 |
| Communication University of Zhejiang, Hangzhou, China | |
| Scholarship for Excellent Social Work | June 2010 |
| Communication University of Zhejiang, Hangzhou, China | |
| Award for the Best Eloquence in Debates | Apr. 2009 |

Branch of Youth League Commission in School of Journalism and Communication,
Communication University of Zhejiang, Hangzhou, China

First Prize in Video Competition Dec. 2008

The 7th Zhejiang Undergraduate Multimedia Works Design Competition, Undergraduate
Students' Science and Technology Contest Committee of Zhejiang Province, Hangzhou,
China

Third Prize in Photography Competition Jan. 2008

Branch of Youth League Commission in School of Journalism and Communication,
Communication University of Zhejiang, Hangzhou, China

First-Class Scholarship Dec. 2007

Communication University of Zhejiang, Hangzhou, China

CERTIFICATES

AI and Machine Learning July 2021

Department of Electrical Engineering & Computer Science, University of Missouri

Psychological Consultant Level 3 Apr. 2015

Occupational Skill Testing Authority, China

Planar Designer June 2010

Computer Education Authorization and Certification, China

Zhejiang Computer Rank Examination Level 3 Sept. 2009

Department of Education of Zhejiang Province, China