Gibong Hong

Champaign, IL, United States
gbhong2@illinois.edu; https://gbhong.github.io

Research Interests

Natural Language Processing: Information Extraction and Text Generation for BioNLP and MathNLP
Computational Social Science: Social Text Mining, Resource Optimization for Social Good

Education

University of Illinois Urbana-Champaign, IL, United States	Starts from Aug 2022

Ph.D. in Information Science
- Supervisor: Prof. Halil Kilicoglu and Prof. Jana Diesner

Yonsei University, Seoul, Korea	Mar 2020 – Feb 2022

M.S. in Digital Analytics
- Thesis: User profiles extraction from dialogue with Transformer-based encoder-decoder models
- Supervisor: Prof. Min Song
- Focus: Natural language processing, Information extraction, Social text analysis
- GPA: 4.28/4.3 (99.6/100)

Yonsei University, Seoul, Korea	Mar 2012 - Feb 2019

Double Major in Political Science and Diplomacy (B.A.) and Communication (B.C.)
- Focus: Online media analysis, Causal inference, Film theory and production
- GPA: 3.72/4.3 (93.2/100)

University of Copenhagen, Copenhagen, Denmark	Feb 2017 - Jul 2017

Exchange Student, Film and Media

Publications

Journals

[J2] **Article retraction analysis in social science domain**
Goeun Heo, YeonJung Choi, Yuheun Kim, **Gibong Hong**, Erjia Yan
Scientometrics (SCI) *(under revision)*

[J1] **BioPREP: Deep learning-based predicate classification with SemMedDB**
Gibong Hong*, Yuheun Kim*, YeonJung Choi*, Min Song
Journal of Biomedical Informatics, 2021. (SCI) (IF 6.317) [Paper] [Code]

* denotes equal contribution

Research Experiences

Research Assistant (PhD student)

BioNLP Group *In iSchool at University of Illinois, Urbana-Champaign, Champaign, IL, U.S.*	Aug 2022 - present

- Entity and relation extraction for personalized nutrition

Research Assistant (PhD student)

Social Computing Lab *In iSchool at University of Illinois, Urbana-Champaign, Champaign, IL, U.S.*	Aug 2022 - present

- Geospatial variability of opioid use and disparities in treatment resources

Research Assistant (Master's student)

Deep Text Lab. *In Information Department at Yonsei University, Seoul, Korea*	Jul 2020 – Feb 2022

- Personalized conversation AI with user persona and dialogue history
- Machine learning-based emerging issue detection
Joint research with *National Assembly Futures Institute of Korea*
- Analysis of retracted scientific publications in social science
Joint research with *Prof. Erjia Yan, College of Computing & Informatics, Drexel University*
- Social media text analysis for 2021 South Korean by-elections
Joint research with *ChannelA, Korea*
- Biomedical predicate classification using SemMedDB

Honors and Awards

Won a prize at **NLP competition for fake news detection**
Nov 2020 - Feb 2021
NH Investment & Securities, Korea
- Developed two-stage classification model to remove fake news from main news contents.

Won 3rd prizes in **two NLP shared tasks at AI problem-solving contest**
Oct 2020 – Nov 2020
National IT Industry Promotion Agency, Korea
- Classified online comments in 1) Radio streaming application and 2) Korean Army SNS.

Grand Prize (Minister's Award) at **Big Contest 2020**
Jul 2020 - Dec 2020
National Information Society Agency, Korea
- Constructed joint LSTM-LGBM model to predict WR, ERA and AVG of Korean baseball teams.
  - **Best performance** across 1,500 teams participated.

Teaching

Teaching Assistant for Text mining
Summer 2021
Dept. of Digital Analytics, Yonsei Univ. Seoul, Korea
- Provided special lecture on text mining theories and explained code implementation.

Teaching Assistant for Python programming
Spring 2021
Dept. of Digital Analytics, Yonsei Univ. Seoul, Korea
- Helped students having difficulties using Python, especially focusing on NumPy, Pandas and data structure.

Work Experiences

Machine learning engineer at Machine Learning Team
Apr 2022 – Aug 2022
Wrtn Technologies Inc, Seoul, Korea
- NER and semantic similarity-based fact-checker for AI-assisted writing tool

Data scientist internship at AI transformation product & biz.
Aug 2021 - Oct 2021
SK Telecom, Seoul, Korea
- Contributed to building Knowledge Map Explorer for personalized AI agent
  - Recommend items to users by mapping keywords from user behavior log data into item vectors.

Broadcasting producer
Feb 2019 - Mar 2020
JTBC Sports, Seoul, Korea
- Coordinated live sports events, handled studio segments, and made extra video contents.

Contents creator internship
Sep 2017 - Feb 2018
SPOTV, Seoul, Korea

Skills

Programming language	Python, R
Machine learning	Pytorch, Tensorflow, NumPy, Pandas
Database	Oracle SQL Developer, Hadoop, Spark

Scholarship

Young Scholar Grant by Pony Chung Foundation (2022-2025), *120,000 USD*
Yonsei Teaching Assistant Scholarship (2020-2021), *4,700 USD*
Yonsei Digital Analytics Scholarship for Excellent Performance in Working group (2020-2021), *3,000 USD*
Yonsei Digital Analytics Scholarship for Excellent Performance in Problem-solving task (2020), *1,500 USD*
Yonsei Truth Scholarship for High Honors (2016), *1,000 USD*

Extra Activities

Linux server administrator
Sep 2020 – Mar 2021
Dept. of Digital Analytics, Yonsei Univ. Seoul, Korea
- Maintained the performance of servers and increased efficiency of server environment regarding GPU issues.

Filmmaker and Screenwriter
Sep 2015 – May 2018
Movie Production Club 'The Dreamers', Seoul, Korea
- Produced short films, wrote lots of short-form scenarios.

Honorably discharged as Sergeant
Oct 2013 – Jul 2015
Military duty as auxiliary police, Gangseo Police Station, Seoul, Korea
- Squad leader of platoon, managing protests for safety reasons and patrolling for crime prevention.