Migyeong Kang

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: gyeong707.github.io : LinkedIn : Google Scholar

Education

Feb 2021 – Feb 2027 (expected)
Ph.D. Candidate in Applied Artificial Intelligence
Sungkyunkwan University, Republic of Korea
Advisor: Prof. Jinyoung Han
Dissertation: Trustworthy Large Language Models for Mental Health

Mar 2016 – Feb 2021
B.S. in Statistics
B.S. in Computer Software
Sungshin Women's University, Republic of Korea

Professional Experience

Sep 2024 – Mar 2025
Visiting Scholar
Indiana University Bloomington, Bloomington, IN, USA
Luddy School of Informatics, Computing, and Engineering
Advisors: Prof. Haewoon Kwak and Prof. Jisun An

Publications

* = (co-)corresponding author; ** = equal contribution

Preprints & Under Review

[U-5] **MENTALBENCH: A DSM-Grounded Benchmark for Evaluating Psychiatric Diagnostic Capability of Large Language Models**
Hoyun Song**, Migyeong Kang**, Jisu Shin, Jihyun Kim, Hangyeol Yoo, Chanbi Park, Ji hyun An, Alice Oh, Jinyoung Han*, and KyungTae Lim*
Under review

[U-4] **DIPSY: Evaluating Diagnostic Information Acquisition in LLM-Based Psychiatric Interviews**
Jisu Shin**, Migyeong Kang**, Jihyun Kim, Hangyeol Yoo, KyungTae Lim, Ji hyun An, Alice Oh, Jinyoung Han, and Hoyun Song*
Under review

[U-3] **Mood-Risk: A Longitudinal Dataset for Disorder-Aware Future Suicidality Prediction**
Hyolim Jeon**, Daeun Lee**, Minhan Cho, Migyeong Kang, Hojoon Kim, Ji hyun An, Christine B. Cha, and Jinyoung Han*
Under review

[U-2] **HARF-News: A Multimodal Benchmark for Disentangling Authorship and Veracity in AI-Era News**
Goun Choi**, Saejin Ju**, Migyeong Kang, Seungbae Kim*, and Jinyoung Han*
Under review

[U-1] **HEED: Heeding Internal Signals to Defend Against Multi-turn Jailbreaks**
Sihyeon Yang, Migyeong Kang, and Jinyoung Han*
Under review

International Conference

[C-10] **Same Symptoms, Different Severity?: Investigating Gendered Cue Effects on LLMs in Depression Severity Assessment** [Code]
Migyeong Kang[**], Sihyeon Yang[**], Minseok Kim, Jihyun An[*], Haewoon Kwak[*], and Jinyoung Han[*]
Findings of the Association for Computational Linguistics (EMNLP 2026)

[C-9] **SCENE: A Scenario Completion Benchmark for Measuring Social Bias in Large Language Models** [Code] [Web] [News]
Migyeong Kang[**], Aechoen Jung[**], Eunchae Jang[**], Minseok Kim, S. Shyam Sundar, Sungeun Hong[*], Yunseok Choi[*], and Jinyoung Han[*]
Findings of the Association for Computational Linguistics (EMNLP 2026)

[C-8] **SynSym: A Synthetic Data Generation Framework for Psychiatric Symptom Identification** [DOI] [Code]
Migyeong Kang, Jihyun Kim, Hyolim Jeon, Sunwoo Hwang, Jihyun An, Yonghoon Kim, Haewoon Kwak, Jisun An, and Jinyoung Han[*]
ACM SIGKDD Conference on Knowledge Discovery and Data Mining (KDD 2026)

[C-7] **Somatic in the East, Psychological in the West?: A Clinically-Grounded Evaluation of Cross-Cultural Depression Symptoms in LLMs** [DOI]
Shintaro Sakai, Jisun An, Migyeong Kang, and Haewoon Kwak
Workshop on Cross-Cultural Considerations in NLP (C3NLP 2026)

[C-6] **Using LLM for Conversational Assessment of Mental Health: Testing the Role of Message Contingency and User Agency** [DOI]
Doha Kim[**], Saejin Ju[**], Hui Min Lee, Migyeong Kang, Minseok Kim, Yoonvin Park, Hayeon Song, S. Shyam Sundar, and Jinyoung Han[*]
Extended Abstracts of the CHI Conference on Human Factors in Computing Systems (CHI EA 2026)

[C-5] **Show Your Mind: Unveiling User Experience on an AI-based Mental Health Assessment System with Symptom-based Evidences** [DOI]
Hyunseon Won[**], Migyeong Kang[**], Minji Kim[**], Daeun Lee, Hyein Choi, Yonghoon Kim, Daejin Choi, Minsam Ko, and Jinyoung Han[*]
Extended Abstracts of the CHI Conference on Human Factors in Computing Systems (CHI EA 2025)

[C-4] **CURE: Context- and Uncertainty-Aware Mental Disorder Detection** [DOI] [Code]
Migyeong Kang, Goun Choi, Hyolim Jeon, Jihyun An, Daejin Choi[*], and Jinyoung Han[*]
Conference on Empirical Methods in Natural Language Processing (EMNLP 2024)

[C-3] **Poster: ISOML: Inter-Service Online Meta-Learning for Newly Emerging Network Traffic Prediction** [DOI]
Migyeong Kang[**], Juho Jung[**], Minhan Cho, Daejin Choi[*], Eunil Park, Sangheon Pack, and Jinyoung Han[*]
ACM International Conference on Mobile Systems, Applications, and Services (MobiSys 2024) (Poster)

[C-2] **Network Data Generation using IP2Vec Embedding** [DOI]
Minji Kim, Migyeong Kang, Eunil Park, Sangheon Pack, and Jinyoung Han*
International Conference on Information and Communication Technology Convergence (ICTC 2023)

[C-1] **Detecting Suicidality with a Contextual Graph Neural Network** [DOI] [Code]
Daeun Lee, Migyeong Kang, Minji Kim, and Jinyoung Han*
Workshop on Computational Linguistics and Clinical Psychology (CLPsych 2022)

Journal Articles

[J-2] **A Meta-Frontier Analysis of the Impact of CEO Education on the Performance of Software Startups** [Paper]
Chungheon Lee**, Migyeong Kang**, and Daeho Lee
Innovation Studies, 20(4), 275–289 (2025) (KCI)

[J-1] **Detecting depression on video logs using audiovisual features** [DOI]
Kyungeun Min**, Jeewoo Yoon**, Migyeong Kang, Daeun Lee, Eunil Park, and Jinyoung Han*
Humanities and Social Sciences Communications, 10, Article 788 (2023) (SSCI, JCR 2022 IF = 3.5)

Patents & Software

[P-2] **Apparatus of Detecting Mental Disorder and Method Thereof**
Inventors: Jinyoung Han, Migyeong Kang, and Jihyun An
Application No.: 10-2025-0068635
Filing Date: 2025-05-27
Republic of Korea

[P-1] **Apparatus for Generating Traffic Data and Method Thereof**
Inventors: Jinyoung Han, Migyeong Kang, Minji Kim, and Eunil Park
Patent No.: 10-2982038
Grant Date: 2026-06-22
Application No.: 10-2023-0180440
Filing Date: 2023-12-13
Republic of Korea

[S-5] **A Goal-Oriented Dialogue Agent System for PHQ-9 Assessment**
Authors: Jinyoung Han, Migyeong Kang, and Saejin Ju
Registration No.: C-2025-049090
Registration Date: 2025-11-12
Republic of Korea

[S-4] **An LLM-Based Bias Detection and Mitigation System for Supporting Depression Diagnosis**
Authors: Jinyoung Han, Migyeong Kang, and Sihyeon Yang
Registration No.: C-2025-047842
Registration Date: 2025-11-07
Republic of Korea

[S-3] **Vision-Language Risk Detection from Multiple CCTV Frames through Multi-LLM Collaboration**
Authors: Jonghyeon Lee, Migyeong Kang, and Jinyoung Han
Registration No.: C-2025-042901
Registration Date: 2025-10-20
Republic of Korea

[S-2] **A Context and Uncertainty-Based Mental Health Detection System**
Authors: Migyeong Kang and Jinyoung Han
Registration No.: C-2024-050320
Registration Date: 2024-12-05
Republic of Korea

[S-1] **Software for Network Traffic Generation**
Authors: Jinyoung Han, Migyeong Kang, Minji Kim, and Eunil Park
Registration No.: C-2023-037947
Registration Date: 2023-08-25
Republic of Korea

Research Projects

[R-7] **Advancing Models for Anomaly and Risk Prediction Using Interview Data from Electronic Monitoring**
Supported by ETRI[4] Apr 2026 – Oct 2026
Project Lead
- Improved anomaly prediction models and developed an interpretability module.
- Developed and evaluated a framework for generating synthetic interview records.

[R-6] **Development and Commercialization of Multimodal Artificial Intelligence (AI) Digital Medical Devices for Diagnosis and Interventional Treatment of Depression and Anxiety Disorders**
Funded by MOTIE[5] / KICOX[6] Apr 2025 – Jun 2027
Researcher & Project Lead
- Developed a conversational agent to collect mental health symptoms.
- Designed a kiosk–server architecture supporting dialogue and multimodal data transfer.
- Established a data collection environment and collected data from over 200 participants.

[R-5] **Development of Reliable, Secure, and Safe Human–AI Alignment Techniques**
Funded by MSIT[1] / IITP[2] Apr 2024 – Dec 2026
Researcher & Project Lead
- Analyzed human–AI alignment factors for LLMs in mental health dialogues.
- Developed aligned mental health dialogue models with a focus on interpretability, controllability, and ethical safety.

[R-4] **Predicting Psychological Warning Signs Using Interview Data from Electronic Monitoring**
Supported by ETRI[4] Jun 2025 – Sep 2025
Project Lead
- Developed and evaluated interview-based models for psychological risk prediction.
- Visualized key features, tokens, and time points contributing to model predictions.

[R-3] **Development and Evaluation of an LLM-Based Conversational Model for Mental Health Counseling (Computing Resource Support)**
Supported by MSIT[1] / NIPA[7] May 2024 – Dec 2024
Project Lead
- Curated mental health counseling datasets for training large language models.
- Developed LLM-based counseling models focused on empathy and personalization.

[R-2] **Study on Self-Driving B5G Networks towards Federated Private-5G**
Funded by MSIT[1] / NRF[3] Jun 2021 – Feb 2024
Researcher
- Processed time-series network traffic data and developed forecasting models.
- Developed network traffic forecasting methods based on meta-learning and continual learning to address limited data and evolving traffic patterns.

[R-1] **Developing Artificial Intelligence Application Models and Constructing Datasets for Solving Social Issues**
Supported by ETRI[4] May 2021 – Aug 2021
Researcher
- Curated Korean mental health datasets with disorder- and symptom-level annotations.
- Developed mental disorder detection models using deep learning and built a web interface for interactive inference.

Sponsor
[1] MSIT: Ministry of Science and ICT, Korea
[2] IITP: Institute of Information & Communications Technology Planning & Evaluation, Korea
[3] NRF: National Research Foundation of Korea
[4] ETRI: Electronics and Telecommunications Research Institute, Korea
[5] MOTIE: Ministry of Trade, Industry and Energy, Korea
[6] KICOX: Korea Industrial Complex Corporation
[7] NIPA: National IT Industry Promotion Agency, Korea

Honors & Awards

Aug 2025 **2nd Prize, Best Student Researcher Award**
Department of Artificial Intelligence, College of Global Convergence, Sungkyunkwan University

Jun 2024 **ACM MobiSys 2024 Student Travel Award ($1,000)**
The 22nd ACM International Conference on Mobile Systems, Applications, and Services

Professional Service

May 2025 **Program Committee Member**
2025 Bias-A-Thon: Bias Discovery Challenge, Dacon
Supported problem formulation and reviewed submitted solutions for bias detection models.

Teaching Experience

Teaching Assistant

Sungkyunkwan University, Seoul, Republic of Korea

- NH NongHyup Data Science Project Course — Spring 2025
- DIM5004: Interactive Graph Mining, Graduate Course — Spring 2025
- DIM5004: Interactive Graph Mining, Graduate Course — Spring 2024
- DIM5004: Interactive Graph Mining, Graduate Course — Fall 2023
- AAI3005: Data Mining, Undergraduate Course — Fall 2023
- DAI5019: Graph Mining, Graduate Course — Spring 2023
- DAI5019: Graph Mining, Graduate Course — Fall 2022

Lectures & Instruction

National Information Society Agency (NIA), Republic of Korea

- **Lecturer:** Generative AI Technology Trends — Jul 2024
  Practical guidance, use cases, and comparisons of Claude and GPT.
- **Instructor:** Data Creator Camp (DCC) — Fall 2023
  Live online instruction for middle and high school students.

Student Mentoring

Sungkyunkwan University, Seoul, Republic of Korea

Tutor, Undergraduate Research Program (URP)

- Development of Counseling Models and Interactive Web Platform — Fall 2024
- Advancing Psychiatric Symptom Identification with LLMs — Spring 2024
- Psychiatric Symptom Identification for Detecting Mental Disorders — Winter 2023
- Network Traffic Prediction with Low-Resource Network — Fall 2023

National Information Society Agency (NIA), Republic of Korea

Mentor, K-ICT Big Data Center

- Data Creator Camp — 2026
- Data Creator Camp — 2025
- Data Creator Camp — 2023
- Data Creator Camp — 2022

References

Prof. Jinyoung Han (e-mail: jinyounghan@skku.edu)

- Associate Professor
- Department of Applied Artificial Intelligence, Sungkyunkwan University, Seoul, Republic of Korea

Prof. Haewoon Kwak (e-mail: hwkwak@iu.edu)

- Associate Professor
- Luddy School of Informatics, Computing, and Engineering, Indiana University Bloomington, Bloomington, IN, USA

Prof. Jisun An (e-mail: jisunan@iu.edu)

- Assistant Professor
- Luddy School of Informatics, Computing, and Engineering, Indiana University Bloomington, Bloomington, IN, USA