

# Hyojin Chin

Data Science Group, Institute for Basic Science (IBS), 55, Expo-ro, Yuseong-gu, Daejeon, Republic of Korea, 34126

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## Research Interest

**Understanding and Designing Human Interactions with Artificial Intelligence Systems,**

**Applied Data Mining** : Explaining and predicting unknown behavior by analyzing data,

Human-Computer Interaction, Computational Social Science, Affective Computing, Natural Language Processing.

## Education

### KAIST (Korea Advanced Institute of Science and Technology)

Daejeon, S.Korea

PH.D. IN KNOWLEDGE SERVICE ENGINEERING (INDUSTRIAL ENGINEERING DEPARTMENT)

Aug. 2015 - Aug. 2020

- Adviser: Mun Yong Yi
- Thesis: Understanding How a Conversational Agent Should Respond to Users' Verbal Abuse: A Multimodal Approach to Designing Emotionally Intelligent Agent

### KAIST (Korea Advanced Institute of Science and Technology) College of Business

Seoul, S.Korea

M.B.A. IN INFORMATION AND MEDIA (FULL TIME)

Feb. 2013 - Feb. 2014

- Certificate of Excellence, 1st half Semester

### University of Southern California Marshall School of Business

Los Angeles, USA

STRATEGIC ENTERTAINMENT AND MEDIA MANAGEMENT PROGRAM

Aug. 2013

- Certificate of Excellence

### Seoul Women's University

Seoul, S.Korea

BACHELOR OF SCIENCE IN FOOD AND MICROBIAL TECHNOLOGY

Mar. 1999 - Feb. 2004

- 2nd Major: Bachelor of Business Administration in Business Administration

## Professional Experience

### Institute for Basic Science (IBS)

Daejeon, S.Korea

SENIOR RESEARCHER

Sep.2020 - Present

- Chief Investigator: Dr. Meeyoung Cha
- Data Science Group, Center for Mathematical and Computational Sciences

### Innocean Worldwide (Hyundai Motor Company's global marketing communication enterprise)

Seoul, S.Korea

MARKETING DEPARTMENT, SENIOR ACCOUNT PLANNER

Apr.2011 - Aug.2015

- Analyze quantitative and qualitative data on Hyundai motor group's automotive products—gathered from user studies, surveys, and social media—and translate into tactical insights to support clients and project teams.
- Monitor online customer feedback on Hyundai motor group's automotive product brand and report on issues and trends.
- Develop KIA motors' global corporate brand communication strategies and communication guidelines.

### Samsung Electronics

Suwon, S.Korea

BRAND MARKETING DEPARTMENT, ASSISTANT MANAGER

Feb.2004 - Apr.2011

- Develop and execute global home appliance product launching strategies, including advertising, ATL, BTL and public relations.
- Develop global and regional brand management strategies for home appliance products.

### Samsung Electronics

Seoul, S.Korea

YOUNG PLUS MEMBERSHIP, INTERN

Feb.2003 - Dec.2003

- Young Plus Membership is a program supported by Samsung Electronics that provides opportunities for limitless creative activities for students who have an interest in marketing or product design.

### SK Telecom

Seoul, S.Korea

SEGMENT MARKETING TEAM, MARKETING INTERN

Aug. 2002 - Feb. 2003

- Propose marketing and product ideas for the 10-29 age group.

## Voices that Care Differently: Understanding the Effectiveness of a Conversational Agent with an Alternative Empathy Orientation and Emotional Expressivity in Mitigating Verbal Abuse

Taylor & Francis

INTERNATIONAL JOURNAL OF HUMAN-COMPUTER INTERACTION (IF 3.353)

2021

- **Hyojin Chin** and Mun Yong Yi. 2021. Voices that Care Differently: Understanding the Effectiveness of a Conversational Agent with an Alternative Empathy Orientation and Emotional Expressivity in Mitigating Verbal Abuse. International Journal of Human-Computer Interaction (Accept)

## An Experimental Study to Understand User Experience and Perception Bias Occurred by Fact-checking Messages

InLjubljana, Slovenia

THE WEB CONFERENCE (WWW) 2021

Apr. 2021

- Sungkyu Park, Jamie Yejean Park, **Hyojin Chin**, Jeong-han Kang, and Meeyoung Cha. 2021. An Experimental Study to Understand User Experience and Perception Bias Occurred by Fact-checking Messages. In Ljubljana '21: 30th The Web Conference, April 19–23, 2021, Ljubljana, Slovenia. ACM, New York, NY, USA, 12 pages. <https://doi.org/10.1145/1122445.11224>

## Empathy Is All You Need: How a Conversational Agent Should Respond to Verbal Abuse

Honolulu, USA

CHI 2020

Apr. 2020

- **Hyojin Chin**, Lebogang Wame Molefi, and Mun Yong Yi. 2020. Empathy Is All You Need: How a Conversational Agent Should Respond to Verbal Abuse. In Proceedings of the 2020 CHI Conference on Human Factors in Computing Systems (CHI '20). Association for Computing Machinery, New York, NY, USA, 1–13.

## A Study of Verbal Abuse Types and Conversational Agents' Response Styles

Glasgow, UK

CHI 2019

May. 2019

- **Hyojin Chin** and Mun Yong Yi. 2019. Should an Agent Be Ignoring It? A Study of Verbal Abuse Types and Conversational Agents' Response Styles. In Extended Abstracts of the 2019 CHI Conference on Human Factors in Computing Systems (CHI EA '19). Association for Computing Machinery, New York, NY, USA, Paper LBW2422, 1–6.

## Explicit Content Detection in Music Lyrics Using Machine Learning

Shanghai, China

BIGCOMP 2018

Jan. 2018

- **Hyojin Chin**, Jayong Kim, Yoonjong Kim, Jinseop Shin, Mun Yong Yi. 2018 IEEE International Conference on Big Data and Smart Computing (BigComp), Shanghai, 2018, pp. 517–521

## WatchOut: Facilitating Safe Driving Behaviors with Social Support

Denver, USA

CHI 2017

May. 2017

- **Hyojin Chin**, Hengameh Zabihi, Sangkeun Park, Mun Yong Yi, and Uichin Lee. 2017. WatchOut: Facilitating Safe Driving Behaviors with Social Support. In Proceedings of the 2017 CHI Conference Extended Abstracts on Human Factors in Computing Systems (CHI EA '17). Association for Computing Machinery, New York, NY, USA, 2459–2465.

## A Study on the Categories and Characteristics of Depressive Moods in Chatbot Data

S.Korea

ACK 2021

Nov. 2021

- **Hyojin Chin** et al. 2021. Proceedings of the Korea Information Processing Society Conference, 28(2) pp.993–996

## Hate Speech Detection in Chatbot Data Using KoELECTRA

S.Korea

HCLT 2021

Oct. 2021

- Mingi Shin and **Hyojin Chin** et al. 2021. Proceedings of the 33th Annual Conference on Human and Cognitive Language Technology, pp.518–523

## A Study on the Influence of Contents of Internet News Comments on the Acceptance of New Car Products

S.Korea

KCC 2017

Jun. 2017

- **Hyojin Chin** et al. 2017. Proceedings of the Korean Information Science Society Conference. 605–608

## Job Preference Analysis and Job Matching System Development for the Middle Aged Class

S.Korea

JOURNAL OF INTELLIGENCE AND INFORMATION SYSTEMS

Dec. 2016

- Kim, Seongchan, Jincheul Jang, Seong Jung Kim, **Hyojin Chin** and Mun Yong Yi. 2016. Job Preference Analysis and Job Matching System Development for the Middle Aged Class. Journal of Intelligence and Information Systems. 22(4), 247–264

## Job Preference and Selection Analysis of Senior People for Developing Senior Job Recommendation Algorithm

S.Korea

KCC 2016 PAPER

Jun. 2016

- SeongJung Kim, Seongchan Kim, Jincheul Jang, **Hyojin Chin**, and Mun Y. Yi. 2016. Job Preference and Selection Analysis of Senior People for Developing Senior Job Recommendation Algorithm. Proceedings of the Korean Information Science Society Conference, 331–333.

## Requirement Analysis of Personalized Job Matching Service for Middle-Aged Adults in South Korea

S.Korea

HCI KOREA 2016 PAPER

Jan. 2016

- Jincheul Jang, Dapeng Zhao, Seongchan Kim, **Hyojin Chin**, SeongJung Kim, and Mun Y. Yi. 2016. Requirement Analysis of Personalized Job Matching Service for Middle-Aged Adults in South Korea. Proceedings of the HCI Society of Korea, 68–69.

## Research Experience

### Human-Agent Interaction for Distributed Intelligence System

RESEARCH ASSISTANT AT KIRC FUNDED BY ETRI (ELECTRONICS AND TELECOMMUNICATIONS RESEARCH INSTITUTE).

Daejeon, S.Korea

Oct. 2017 - Current

- Study human interaction with collaborative intelligence between people, objects, and space.
- Study issues related to transparency, uncertainty, motivation & trust in interaction between conversational agent and users.

### Planning and Design of Big Data-Based Expert Recommendation systems

RESEARCH ASSISTANT AT KIRC FUNDED BY NRF (NATIONAL RESEARCH FOUNDATION OF KOREA).

Daejeon, S.Korea

Mar. 2017 - Sep. 2017

- Develop a system that recommends the panel of experts who can review research projects by matching the similarities between the researcher's thesis and the research proposals' text content.

### Real Estate Price Evaluation Using Machine Learning

RESEARCH ASSISTANT AT KIRC FUNDED BY KAB (KOREA APPRAISAL BOARD).

Daegu, S.Korea

July. 2016 - Dec. 2016

- Develop real estate price estimation model and apply machine learning algorithm.
- Analyze real estate data concerning land and house prices in South Korea.

### Implementation of Smart Data Town Platform with Big data & IOT

RESEARCH ASSISTANT AT KIRC FUNDED BY IITP (INSTITUTE OF INFORMATION & COMMUNICATIONS TECHNOLOGY PLANNING & EVALUATION).

Daejeon, S.Korea

Aug. 2015 - Mar. 2016

- Job Preference Analysis and Job Matching System Development for the Middle Aged Class.

## Academic Activities

Program Committee, The World Wide Web Conference, 2021

Teaching Assistant, Business Intelligence, KAIST KSE521, 2020 Spring, 2017 Fall

Teaching Assistant, Human Decision Making and Support, KAIST KSE612, 2019 Fall, 2018 Spring.

## Copyright

**Copyright Number: C-2016-009103**, Job classification table for middle-aged adults' personalized job matching. **Hyojin Chin**, J. Jang, SC. Kim, SJ. Kim, and Mun Y. Yi, April.12.2016

**Copyright Number: C-2016-006607**, Personalized job matching algorithm for middle-aged adults. SJ Kim, SC. Kim, J. Jang, **Hyojin Chin**, and Mun Y. Yi, March.15.2016.

## Awards

### ACADEMIC

- 2019 **1st Prize**, Best Presentation Award at the Knowledge Service Engineering Student Colloquium, KAIST
- 2014 **Leadership Award**, KAIST college of business
- 2013 **The Best Student of The Year**, Dean's Award of KAIST College of Business
- 2000 **2nd Prize**, English Speech Contest of Seoul Women's University

Daejeon, S.Korea

Seoul, S.Korea

Seoul, S.Korea

Seoul S.Korea

### INDUSTRY

- 2012 **3rd Prize**, New Business Idea Competition by Innocean Worldwide
- 2004 **Outstanding Service Award**, Samsung Electronics Leadership Center
- 2003 **Excellence Award**, The 2nd Future Digital Appliances Idea Competition by Samsung Electronics: Proposal for digital home appliance ideas considering future residential trends and lifestyle changes.

Seoul, S.Korea

Suwon, S.Korea

Seoul, S.Korea

## Extracurricular Activities

### KAIST Run: Fundraising Event Aimed at Providing Science Education Programs for Children from Multicultural Families in Korea

S.Korea

EVENT PLANNING AND DESIGN

July. 2013 - May. 2014

- 100 KAIST students and faculty members participated in the Chuncheon Marathon Race to raise a science education fund for children in multicultural families.
- 600 people donated. We raised 20 million won through fundraising in 3 months.
- A science education program by KAIST was provided to 80 multicultural children (2014.05.31 06.01).
- Media Coverage: Chosun Ilbo. 23rd Oct. 2013. <http://goo.gl/NNQvPB>

## Crowdfunding-Based Rural Aid Project: 'Daepungnyeon'

S.Korea

PRODUCT PLANNING, NAMING, AND MARKETING

Aug. 2014 - Mar. 2015

- Helped farmers by repackaging and rebranding fruits that were in danger of being discarded due to too much harvest and sold the products through crowdfunding sites.
- Media Coverage: Chosun Ilbo. 17th Mar. 2015. <https://goo.gl/tXVggR>

## Korea Indie Band's Brand Identity Consulting Project

S.Korea

RESEARCH DESIGN AND QUANTITATIVE SURVEY DESIGN

Oct. 2013 - Jan. 2014

- Conducted a brand identity survey on the images of seven famous Korean indie bands.
- Suggested the brand identity of the rookie band 'Rock and Roll Radio' based on the survey results.
- Media Coverage: Herald Biz. 7th May. 2014. <https://bit.ly/2XZ4axo>

## New Employee Training Programs' Facilitator for 200 New Employees of Samsung Group

S.Korea

TRAINING FACILITATOR

Jan. 2007 - Mar. 2007

## 7th Busan International Film Festival

S.Korea

VOLUNTEER FOR GUEST SERVICE TEAM

Sep. 2002 - Nov. 2002

## Certificate

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|----|---|---------|
| 01 | <b>Survey Analyst, Junior</b> , National Technical Qualification Certificate (No.16201132371H)                                    | S.Korea |
| 02 | <b>Korean History Proficiency Test, Level-2</b> , National History Compilation Committee (No.45-235288)                           | S.Korea |
| 03 | <b>Computer Specialist in Spreadsheet &amp; Database Level-2</b> , National Technical Qualification Certificate (No.03-K9-017407) | S.Korea |

## Skills

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### Data Science

R, SPSS, WEKA, AND PYTHON

- Statistical Analysis, Data Mining, Data Visualization, Machine Learning

### User Research Method

USER STUDY

- Interviewing (In-depth & Focus Group), Participant-Observation, Survey Design, Experiment Design, Usability Test

### Design Conversational Agent

GOOGLE DIALOGFLOW, IBM WATSON, GOOGLE ASSISTANT

- Develop a text-base and voice-base conversational agents.