

# JAY SHIN

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## EDUCATION

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**Hong Kong University of Science and Technology (HKUST)** *Sep 2017 - Feb 2020*  
M.Phil. in Electronic and Computer Engineering  
Thesis: *Learning to Converse with Empathy in Open-domain Dialogue Systems*  
Advised by *Prof. Pascale Fung*

**Hong Kong University of Science and Technology (HKUST)** *Sep 2013 - June 2017*  
B.Eng. in Computer Science, Minor in Entrepreneurship  
Advised by *Prof. Sunghun Kim*

## SELECTED PUBLICATIONS

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*\* indicates equal contribution*

### Evaluating the Knowledge Dependency of Questions

Hyeongdon Moon, Yoonseok Yang, Hangeol Yu, Seungtaek Choi, Seunghyun Lee, Myeongho Jeong, Juneyoung Park, Minsam Kim, **Jamin Shin**  
Under Review, Corresponding Author

### Towards Zero-Shot Functional Compositionality of Language Models

{Hangeol Yu, Myeongho Jeong, **Jamin Shin**}\*, Hyeongdon Moon, Juneyoung Park, Seungtaek Choi  
Under Review

### Dialogue Summaries as Dialogue States (DS2), Template-Guided Summarization for Few-shot Dialogue State Tracking

{**Jamin Shin**, Hangeol Yu, Hyeongdon Moon}\*, Andrea Madotto, Juneyoung Park  
ACL 2022, Findings (Long)

### KLUE: Korean Language Understanding Evaluation

Too many authors to list out  
NeurIPS 2021 Datasets and Benchmark Track

### Pedagogical Word Recommendation: A novel task and dataset on personalized vocabulary acquisition for L2 learners

**Jamin Shin**, Juneyoung Park  
arXiv (2021)

### Tracing Knowledge for Tracing Dropouts: Multi-Task Training for Study Session Dropout Prediction

Seewoo Lee, Kyu Seok Kim, **Jamin Shin**, Juneyoung Park  
EDM 2021

### Fast End-to-End Coreference Resolution for Korean

Cheoneum Park, **Jamin Shin**, Sungjoon Park, Joonho Lim, Changki Lee  
EMNLP 2020, Findings (Long)

### Generating Empathetic Responses by Looking Ahead the User's Sentiment

**Jamin Shin**, Peng Xu, Andrea Madotto, Pascale Fung  
ICASSP 2020 (Oral Presentation)

### Attention over Parameters for Dialogue Systems

Andrea Madotto, Zhaojiang Lin, Chien-Sheng Wu, **Jamin Shin**, Pascale Fung  
3rd Conversational AI Workshop, NeurIPS 2019 (Best Paper Award & Oral Presentation)

### CAiRE: An End-to-End Empathetic Chatbot

Zhaojiang Lin, Peng Xu, Genta Indra Winata, Farhad Bin Siddique, Zihan Liu, **Jamin Shin**, Pascale Fung  
AAAI 2020, Demo track

### **Zero-shot Cross-lingual Dialogue Systems with Transferable Latent Variables**

Zihan Liu, **Jamin Shin**, Yan Xu, Genta Indra Winata, Peng Xu, Andrea Madotto, Pascale Fung  
EMNLP 2019

### **MoEL: Mixture of Empathetic Listeners**

Zhaojiang Lin, Andrea Madotto, **Jamin Shin**, Peng Xu, Pascale Fung  
EMNLP 2019 (Oral Presentation)

### **Hierarchical Meta-Embeddings for Code-Switching Named Entity Recognition**

Genta Indra Winata, Zhaojiang Lin, **Jamin Shin**, Zihan Liu, Pascale Fung  
EMNLP 2019

### **CAiRE\_HKUST at SemEval-2019 Task 3: Hierarchical Attention for Dialogue Emotion Classification**

Genta Indra Winata, Andrea Madotto, Zhaojiang Lin, **Jamin Shin**, Pascale Fung  
NAACL 2019, SemEval Task 3 (Shared task: 4th place out of 160 submissions)

### **End-to-End Question Answering Models for Goal-Oriented Dialog Learning**

**Jamin Shin**, Andrea Madotto, Minjoon Seo, Pascale Fung  
AAAI 2019, Dialog System Technology Challenge 7 (DSTC)

### **Interpreting Word Embeddings with Eigenvector Analysis**

**Jamin Shin**, Andrea Madotto, Pascale Fung  
NeurIPS 2018, Interpretability and Robustness in Audio, Speech, and Language Workshop (IRASL) (Oral Presentation)

### **Reducing Gender Bias in Abusive Language Detection**

Ji Ho Park, **Jamin Shin**, Pascale Fung  
EMNLP 2018 (Oral Presentation)

## **INDUSTRY RESEARCH EXPERIENCE**

*\* mandatory military service as Technical Research Personnel for the Republic of Korea*

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### **NAVER AI Lab\***

Aug 2022 - Present

*Research Scientist*

- Language Research team.

### **Riiid AI Research\***

*Research Manager*

July 2021 - Aug 2022

- Created and managed a forward-thinking research group (7 people - 2 in USA, 5 in Korea) that focuses on bridging the gap between NLP and Education.
- Supervised research that proposed a novel Automatic Quality Assurance method for Educational Assessment Questions that could be potentially used for both human-made and machine-generated assessment questions.
- Lead research on using dialogue summarization to achieve SOTA performance on Few-shot Dialogue State Tracking, which would allow Riiid to save data collection costs for educational dialogues.
- Lead a fundamental research project that explores the functional compositionality of Large Language Models.
- Submitted 2 works to EMNLP 2022 (under review), and 1 work has been accepted to ACL 2022 (Findings).

*Research Scientist*

May 2020 - July 2021

- Mainly participated in Riiid's flagship English learning app, Santa TOEIC.
- Created the first vocabulary recommendation model and its accompanying dataset for Santa.
- Conducted various experiments and data analysis to expose the weakness of Santa's score prediction in short sequence inputs.

- Participated in Session Dropout Prediction research that aimed to predict when a student would stop using the app during his/her study session.

#### **Amazon Alexa AI**

Sep 2019 - Mar 2020

*Applied Scientist Intern*

- Advised by *Dr. Kai Hui* and *Dr. Weiwei Cheng*.
- As a part of the Alexa Search team, I researched on methods for adapting the question-answering model to new domains of search queries (e.g. COVID-19). Specifically, I investigated the applicability of meta-learning for few-shot domain adaptation of question answering.

#### **NAVER Clova AI**

June 2018 - Aug 2018

*Research Intern*

- Advised by *Prof. Minjoon Seo*.
- Conducted research on End-to-End Dialog Systems using End-to-End Question Answering models.

### **SOFTWARE ENGINEERING EXPERIENCE**

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#### **RIDI Corp**

June 2017 - August 2017

*Software Engineer Intern in RIDI Story Team*

*Seoul, Korea*

- Created an *image optimization server* with CloudFront and Lambda, that significantly reduced book thumbnail image load time using dynamic resizing and caching.
- Created a *browser scroll restoration* feature, which is critical for e-book readers, for the React-native application.
- Implemented a customized Django unit testing framework for the team and added continuous integration with Docker and Travis CI for improved productivity of the team.

#### **nViso**

Feb 2016 - Aug 2016

*Software Engineer Intern*

*Lasusanne, Switzerland*

- Created an iOS App using nViso Facial Emotion Recognition API.
- Created automatic cross-platform building tools for large-scale C++ libraries for mobile/web real-time facial emotion detection.
- Created client-facing interactive web demos for nViso Facial Emotion Recognition API.

### **ACADEMIC SERVICES**

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- Organizer: Workshop on The Imagining Post-COVID Education with AI (TIPCE) at AAAI 2021
- Conference Program Committee Member: ACL/EMNLP/NAACL 2019-2022, CHI 2022
- Workshop Program Committee Member: AAAI-TIPCE 2021, NLP4PI 2021-2022

### **INVITED TALKS**

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- SummDial Session @ 26th Workshop on the Semantics and Pragmatics of Dialogue
- NLP Session @ The 6th Joint Conference of Korean Artificial Intelligence Association

### **HONORS & AWARDS**

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- HKUST Postgraduate Studentship, 2017 - 2019
- HKUST School of Engineering Deans List Award, 2017
- 2nd place in Cathay Pacific Hackathon, 2016
- Professor Wilson Tang Engineering Scholarship, 2013