

# Donghyeon Kim

Ph.D. in Computer Science and Engineering  
Senior Research Engineer at AIRS, Hyundai Motor Company

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## RESEARCH INTERESTS

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Language Modeling, Question Answering, Information Retrieval, Bioinformatics

## EDUCATION

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**Korea University, Seoul** March 2011 - Feb 2020  
Ph.D. in Computer Science and Engineering (On leave: startups, Oct 2014 - Mar 2018)  
Advisor: Prof. Jaewoo Kang

**Korea University, Seoul** Mar 2003 - Feb 2011  
B.S. in Computer Science Education (On leave: military service, Aug 2006 - Jul 2008)  
Advisor: Prof. Seongbin Park

## WORK EXPERIENCE

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**Hyundai Motor Company** Dec 2019 - Present  
Senior Research Engineer Seoul, Korea

- Language Modeling
- Question Answering: passage retrieval & reranking, reading comprehension

**Konolabs, Inc.** Apr 2016 - Mar 2018 (Dispatch from Korea Univ. Apr 2016 - Dec 2016)  
Data Scientist & Software Engineer Seoul, Korea

- Event start time prediction by learning online calendar event titles, week contexts and user preferences
- Scheduling related sentence classification
- Email bot architecture design & implementation

**Opinion8, Inc.** Oct 2014 - Apr 2016 (Dispatch from Korea Univ.)  
CTO & Co-founder Seoul, Korea

- Opinion, location, and time based entity(restaurant/attraction/hotel) search engine implementation
- Sentiment analysis using dependency trees and part-of-speech tags

## SELECTED PUBLICATIONS

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**Relevance Similarity Scorer and Entity Guided Reranking for Knowledge Grounded Dialog System**  
Hyunkyung Bae, Minwoo Lee, Ahhyeon Kim, Hwanhee Lee, Cheongjae Lee, Cheoneum Park, **Donghyeon Kim**, Kyomin Jung  
DSTC9 Workshop at AACL, Feb 2021

**Transferability of Natural Language Inference to Biomedical Question Answering**  
Minbyul Jeong, Mujeen Sung, Gangwoo Kim, **Donghyeon Kim**, Wonjin Yoon, Jaehyo Yoo and Jaewoo Kang  
BioASQ Lab Workshop at CLEF, Sep 2020

**Building a PubMed knowledge graph**  
Jian Xu, Sunkyu Kim, Min Song, Minbyul Jeong, **Donghyeon Kim**, Jaewoo Kang, Justin F. Rousseau, Xin Li, Weijia Xu, Vette I. Torvik, Yi Bu, Chongyan Chen, Islam Akef Ebeid, Daifeng Li and Ying Ding  
Scientific Data, Jun 2020

### **Pre-trained Language Models for Biomedical Question Answering**

Wonjin Yoon, Jinhyuk Lee, **Donghyeon Kim**, Minbyul Jeong and Jaewoo Kang  
BioASQ Workshop at ECML PKDD, Sep 2019

### **BioBERT: a pre-trained biomedical language representation model for biomedical text mining**

Jinhyuk Lee<sup>†</sup>, Wonjin Yoon<sup>†</sup>, Sungdong Kim, **Donghyeon Kim**, Sunkyu Kim, Chan Ho So and Jaewoo Kang  
Bioinformatics, Sep 2019

### **A Neural Named Entity Recognition and Multi-Type Normalization Tool for Biomedical Text Mining**

**Donghyeon Kim**, Jinhyuk Lee, Chan Ho So, Hwisang Jeon, Minbyul Jeong, Yonghwa Choi, Wonjin Yoon, Mujeen Sung and Jaewoo Kang  
IEEE Access, Jun 2019

### **Learning User Preferences and Understanding Calendar Contexts for Event Scheduling**

**Donghyeon Kim**<sup>†</sup>, Jinhyuk Lee<sup>†</sup>, Donghee Choi, Jaehoon Choi and Jaewoo Kang  
CIKM (full, oral), Oct 2018

### **BEST: Next-Generation Biomedical Entity Search Tool for Knowledge Discovery from Biomedical Literature**

Sunwon Lee<sup>†</sup>, **Donghyeon Kim**<sup>†</sup>, Kyubum Lee, Jaehoon Choi, Seongsoon Kim, Minji Jeon, Sangrak Lim, Donghee Choi, Sunkyu Kim, Aik-Choon Tan and Jaewoo Kang  
PLoS One, Oct 2016

### **Smith Search: Opinion-Based Restaurant Search Engine**

Jaehoon Choi, **Donghyeon Kim**, Donghee Choi, Sangrak Lim, Seongsoon Kim, Youngjae Choi and Jaewoo Kang  
WWW (demo), May 2015

### **Consento: A Consensus Search Engine for Answering Subjective Queries**

Jaehoon Choi, **Donghyeon Kim**, Seongsoon Kim, Junkyu Lee, Sangrak Im, Sunwon Lee and Jaewoo Kang  
WWW (poster), Apr 2012

<sup>†</sup>Equal contribution

## **DOMESTIC PUBLICATIONS**

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### **Efficient codebook expressions of word representations in language modeling**

Byungjoo Kim, Yookyung Koh, Chan Ho So, **Donghyeon Kim** and Jaewoo Kang  
Korea Computer Congress, Jun 2018

### **Utilizing Social Q&A Data for Decision Making**

Jukyung Lee, Jaehoon Choi, **Donghyeon Kim**, Donghee Choi, Minhwan Yoo and Jaewoo Kang  
The 42nd Annual Meeting and Winter Conference of KIISE, Dec 2015

### **Decision making search technology using social big data**

Jaehoon Choi, Donghee Choi, **Donghyeon Kim**, Seongsoon Kim, Sangrak Lim and Jaewoo Kang  
Communications of KIISE, Jan 2014

## **AWARDS**

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### **Winner, biomedical semantic question answering (Task 8b, Phase B, Exact/ideal answers), BioASQ Challenge**

Minbyul Jeong, Mujeen Sung, Gangwoo Kim, **Donghyeon Kim**, Wonjin Yoon, Jaehyo Yoo and Jaewoo Kang  
Sep 2020

### **Winner, biomedical semantic question answering (Task 7b, Phase B, Exact answers), BioASQ Challenge**

Wonjin Yoon, Jinhyuk Lee, **Donghyeon Kim**, Minbyul Jeong and Jaewoo Kang  
Sep 2019

### **The grand prize, Start-up competition, Korea University**

Jaehoon Choi, **Donghyeon Kim** and Donghee Choi  
Jan 2015