

Bonggun Shin

RESEARCH INTEREST

Machine learning, Healthcare, and NLP

EDUCATION

- 2015 – **Ph.D.** in Computer Science
PRESENT *Emory University*, Atlanta, GA
- 2009 **M.S.** in Electrical Engineering
KAIST, Daejeon, South Korea
- 2006 **B.S.** in Computer Engineering
Illinois Institute of Technology, Chicago, IL

WORK EXPERIENCE

W [Portfolio]: <http://bgshin.wordpress.com/portfolio>

Research Intern at **Deargen** MAY'18 – AUG'18
Deep Learning for Genomics

- Invented a new prognosis-related feature selection algorithm in human lung adenocarcinoma transcriptomes. (**KERAS**)
- Frontiers in Genetics 2019

Research Intern at **Visa Research** JUNE'17 – AUGUST'17
Deep Model Compression

- Invented a new embedding compression method ($\times 80$ reduction with better performances) (**KERAS**).
- **US Patent** / IJCAI 2019

Research Intern at **Deargen** MAY'16 – JULY'16
Deep Learning for Genomics

- Invented a new cancer biomarker selection method that not only outperforms the previous SOTA by 3%p, but also aligns with the new markers recently discovered in the literature. (**KERAS**)
- **Korean Patent** / Nature Scientific Report

Research Assist. at **Emory University** AUG'15 – PRESENT
Deep Learning and Drug Discovery

- Proposed a new SOTA drug target interaction method (**TENSORFLOW**) MLHC 2019
- Proposed a (now prev.) SOTA sentiment analysis method for classifying tweets (**TENSORFLOW**).
 WASSA Workshop in EMNLP 2017
- Proposed a new clinical reports classification method (**TENSORFLOW**). IJCNN 2017

SW Engineer at **December & Comp.** FEB'15 – AUG'15
High Frequency Trading System

- Added a new security broker module to the platform (**C++**)
- Researched a NLP based trading strategy (**SCIKIT-LEARN**)
- Initiated smart execution strategy project

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🌐 <https://github.com/bgshin/>
📌 <https://www.linkedin.com/in/bgshin>

SELECTED PUBLICATIONS

G [Google Scholar]: <http://scholar.google.com/citations?user=j9nUzZAAAAAJ>

- 2019 **B Shin**, S. Park, et al.
Cascaded Wx: a novel prognosis-related feature selection framework in human lung adenocarcinoma transcriptomes
FRONTIERS IN GENETICS
- 2019 **B Shin**, S. Park, et al.
Wx: a nn-based feature selection algo. for transcriptomic data
NATURE SCIENTIFIC REPORT, **[citation: 2]**
- 2019 **B Shin**, S. Park, K. Kang, and J.C. Ho
Self-Attention Based Molecule Representation for Predicting Drug-Target Interaction
MLHC
- 2019 **B Shin**, H. Yang, and J.D. Choi
The Pupil Has Become the Master: Teacher-Student Model-Based Word Embedding Distillation with Ensemble Learning
IJCAI
- 2017 **B Shin**, F. H. Chokshi, T. Lee and J.D. Choi
Classification of radiology reports using neural attention models
IJCNN, **[citation: 16]**
- 2017 **B Shin**, T. Lee and J.D. Choi
Lexicon Integrated CNN Models with Attention for Sentiment Analysis
EMNLP WORKSHOP (WASSA), **[citation: 44]**

HONORS AND AWARDS

- NOV 2011 **Best Student Paper Finalist**
International Conference on URAI
- September 2011 **Best TA Award**, KAIST
- 2010 – 2011, **National Fellowship**
2007 – 2008 KAIST
- September 2011 **Student Travel Grant**
RL Competition, ICML workshop
- 2004 – 2006 **Dean's List, Scholarship**
IIT
- Fall 2004 **Research Grant**
Korea Science and Eng. Foundation

TECHNICAL SKILLS

Programming C/C++, PYTHON, Matlab, R,
JAVA, ASSEMBLERS, \LaTeX

Machine Learning KERAS, TENSORFLOW