

# Heesung Lee

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## INTERESTS

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Atypical Business Data Mining, Natural Language Processing, Sustainable Business, ESG, Financial Engineering

## EDUCATION

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### Kyung Hee University

*Undergraduate Student*

*Mar. 2014 ~ Present*

*Seoul, Korea*

- ◆ Bachelor's Degree in Business Management, overall 3.92 / 4.00 major 3.95 / 4.00
- ◆ Expected Graduation Date: Aug. 2020

### Whimoon High School

*High School Diploma*

*Mar. 2009 ~ Feb. 2012*

*Seoul, Korea*

## RESEARCH, COURSEWORK, & PUBLICATION

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### Kyung Hee University Center for Advanced Information Technology

*Researcher (Advisor: Prof. Ohbyung Kwon)*

#### Investigating the Impact of Corporate Social Responsibility on Firm's Short/Long-term Performance through Online Text Analytics

*Spring 2015 ~ Fall 2016*

*Seoul, Korea*

- **ABSTRACT (Excerpt)**  
Keywords related to CSR are extracted from atypical sources, such as newspapers, using text mining techniques to examine the relationship between CSR and firm performance (Lee et al., 2016).
- **PUBLICATION**  
Lee, Heesung & Jin, Yunseon & Kwon, Ohbyung. (2016). Investigating the Impact of Corporate Social Responsibility on Firm's Short- and Long-Term Performance with Online Text Analytics. *Journal of Intelligence and Information Systems*. 22. 13-31. 10.13088/jiis.2016.22.2.013.

#### Near Real-time Prediction of Cryptocurrency Price Trend Using Extended Sentiment Analysis and Deep Learning

*Spring 2019 ~ Present*

*Seoul, Korea*

- The speculative characteristic of cryptocurrency requires quick and accurate forecasting of price fluctuation.
- Suggested a sentiment analysis and deep learning (GAN, weighted Leaky ReLU) mechanism using streaming text sources and minute-based currency price for accurate prediction.
- This work was launched and funded by the Ministry of Education of the Republic of Korea and the National Research Foundation of Korea (NRF-2017S1A3A2066740).
- Publication in progress.
- **Service to be officially launched in 2020 in *Cointelegraph Korea***

**Sample Paper: A Study on the Relationship between the Value of Firm and ...**

*Summer 2018 ~ Present*  
*Seoul, Korea*

- › Keywords: CSiR, Firm Reputation, Tobin's Q
- › Will soon be submitted and updated.

**Sample Paper: On Return Seasonality**

*Fall 2019 ~ Present*  
*Seoul, Korea*

- › Replicated Keloharju, Linnainmaa, and Nyberg (2016)'s work using Korean stock return data and found strong return seasonalities as well.
- › The abnormal alpha of Portfolio 5 is 1.244% per month, and it appears strongly significant with t-statistic of 4.09.

**Sample Paper: The Role and Responsibility of the Media: Investor Sentiment and IPO Stock Exchange Trends**

*Fall 2019 ~ Present*  
*Seoul, Korea*

- › Researched the influence of pre-IPO (Initial Public Offering) corporations' news coverage on stock exchange trends in the market upon public offering.
- › Researched the influence of media tone (mainly press comments) and analysis perspective on the stock exchange trends in the market.

**Pointer Network Analysis of Financial Unstructured Data and Enterprise Value**

*Fall 2018 ~ Winter 2018*  
*Seoul, Korea*

- › Utilized the Pointer Network to examine and analyze the Corporate Social Responsibility of different companies. Mainly focused on analyzing unstructured data such as media reports and news articles.
- › Participated in the development process of a query system by implementing the pointer network analysis

**Relevant University Coursework**

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**Kyung Hee University Courses**

*Spring 2014 ~ Present*  
*Seoul, Korea*

- › MGMT 1001 Business Statistics
- › MGMT 1004 Business Mathematics
- › MGMT 2001 Management Info Systems
- › MATH 1101 Calculus I
- › MATH 1102 Calculus II
- › MATH 113409-21001 Linear Algebra
- › MATH 2501 Probability and Statistics
- › MGMT 3023 Data Analytics and Management
- › MGMT 4027 Economics of Information and Strategy
- › MGMT 7123 Econometrics (Graduate School Course)

**Online Courses**

*Spring 2014 ~ Present*

- › **An Introduction to Interactive Programming in Python**, *Rice University*
- › URL: <https://www.coursera.org/account/accomplishments/verify/ZPL9JEG7LK>
- › **Pattern Discovery in Data Mining**, *University of Illinois-Urbana Champaign*
- › URL: <https://www.coursera.org/account/accomplishments/verify/R2YJYNLLD4>
- › **Machine Learning**, *Stanford University*
- › URL: <https://www.coursera.org/account/accomplishments/verify/37XN2TZYD9GD>
- › **Neural Networks and Deep Learning**, *deeplearning.ai*
- › URL: <https://www.coursera.org/account/accomplishments/verify/GRSUVE62ZZ76>
- › **Improving Deep Neural Networks: Hyperparameter tuning, Regularization, and Optimization**, *deeplearning.ai*

- › URL: <https://www.coursera.org/account/accomplishments/verify/UD6FTFJ3KHZS>
- › **Sequence Models**, *deeplearning.ai*
- › URL: <https://www.coursera.org/account/accomplishments/verify/K2QLSKD77PA8>),

### In-progress Courses

- › **Intro to Deep Learning with PyTorch**, *Udacity*
- › **Deep Learning**, *Udacity*
- › **Machine Learning for Trading**, *Udacity*

## WORK EXPERIENCE & LEADERSHIP

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### DeepSearch Inc. (UBERPLE)

*Jul. 2018 ~ Aug. 2018*

*Research Intern*

*Seoul, Korea*

- › Carried out research on CSO doctorate thesis topic “Correlation between Unstructured Data in Finance and Credit Evaluation”
- › Assisted the 3<sup>rd</sup> Samsung Creative Square Fair
- › Participated in theme conceptualization project for Samsung Asset Management ETF (Exchange Traded Fund) in various fields such as secondary cell, mobile games, North Korea, and fried chicken industry.
- › Theme extraction through deep learning (CNN) and text mining.

### Ministry of Foreign Affairs

*Aug. 2015 ~ Jul. 2017*

*Military Service*

*Seoul, Korea*

- › Worked for the Ministry of Foreign Affairs (Planning and Coordination Office, Ambassador’s Office, and Ministerial Candidate Office) during military service.
- › Assisted coordination of annual Ulchi-Freedom Guardian (UFG) exercise.
- › Assisted confirmation hearings for minister nominee Kang Kyunghwa.

### Shinhan Investment Corp.

*Jul. 2015*

*Intern*

*Seoul, Korea*

- › Worked at the FICC department’s RP division and assisted briefing sessions about daily stock exchange trends and financial issues.
- › Worked at the Equity department’s Financial Derivative division.

### Kyung Hee University Publication Support Office

*Dec. 2018 ~ Feb. 2019*

*Lead Research Assistant*

*Seoul, Korea*

- › Led the team of research assistants for publication of the book *IT and Business Analytics Systems in the Era of the 4<sup>th</sup> Industrial Revolution*.
- › Took responsibility in gathering data about business analytics chapters.
- › Acknowledged as co-author with other research assistants.

### Proseed (Business Studies Club) at Kyung Hee University

*Mar. 2018 ~ Dec. 2018*

*Seminar Chief*

*Seoul, Korea*

- › Coordinated weekly seminar plots and managed discussions during seminars.
- › Planned and Conducted the official industry case study with Asan Foundation.
  - ♦ **Case Study Clients:**
    - CJ 4D-Plex
    - GinGliders
    - NHN ent.
    - Dable
    - BearBetter
    - Simmons
    - NC Soft
    - Kolmar Korea.

## HONORS & DISTINCTIONS

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### Ministerial (Byeongseh Yoon) Award,

Ministry of Foreign Affairs

Dec. 2016

Seoul, Korea

- For excellence in departmental duties and publication of research paper *Investigating the Impact of Corporate Social Responsibility on Firm's Short/Long-term Performance through Online Text Analytics* (Lee et al., 2016)

### Ministerial Award

Ministry of Foreign Affairs

May. 2016

Seoul, Korea

- For excellence in departmental duties.

### Grand Prize

Kyung Hee University, Education Innovation Center

Oct. 2019

Seoul, Korea

- For excellence in research paper publication
- Awarded scholarship by the amount of \$250

### Academic Student Scholarship (Junior year)

Kyung Hee University

Jul. 2018

Seoul, Korea

- For excellence in thesis publication
- Award Amount: \$1,000

### Superiority Scholarship (All Semesters of Enrollment)

Kyung Hee University

Mar. 2014 ~ Present

Seoul, Korea

- For excellence in academic performance with the highest GPA in the department of business management
- Award Amount: \$3,500 \* 7 Semesters

### Best Portfolio Award (Grand Prize)

Kyung Hee University

Nov. 2018

Seoul, Korea

- For excellence in an academic portfolio in all Kyung Hee University departments.

## TECHNICAL SKILLS

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### Language Skills

- **Native** in Korean
- **Fluent** in English language (Reading, Writing, Listening, Speaking)
  - ◆ IBT TOEFL
  - ◆ GRE Verbal 152

### Software Handling Skills

- Python
- R
- STATA
- Bloomberg Terminal
- Thomson Reuters Eiko
- Tableau
- UCINET (Elementary)
- SAS (Elementary)
- JAVA (Elementary)

## RESEARCH REFERENCES

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### Obyung Kwon

Professor

Kyung Hee University

Phone:

Email: obkwon@khu.ac.kr

Web:

**Ted Ahn**

Chief Sales Officer (CSO)  
Ph.D. Candidate in Finance  
DeepSearch Inc.

Phone:

Email: [tahn@deepsearch.com](mailto:tahn@deepsearch.com)

Web:

**Alpha Beta**

Professor

(직위)

Kyung Hee University

Phone:

Email:

Web: