# Heesung Lee

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## INTERESTS

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

## EDUCATION

**Kyung Hee University**                                              *Mar. 2014 ~ Present*
*Undergraduate Student*                                                      *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**                                             *Mar. 2009 ~ Feb. 2012*
*High School Diploma*                                                        *Seoul, Korea*

## RESEARCH, COURSEWORK, & PUBLICATION

**Kyung Hee University Center for Advanced Information Technology**
*Researcher (Advisor: Prof. Ohbyung Kwon)*

**Investigating the Impact of Corporate Social Responsibility on Firm's**         *Spring 2015 ~ Fall 2016*
**Short/Long-term Performance through Online Text Analytics**                              *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**        *Spring 2019 ~ Present*
**Sentiment Analysis and Deep Learning**                                                   *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*
    ‣ Keywords: CSiR, Firm Reputation, Tobin's Q     *Seoul, Korea*
    ‣ Will soon be submitted and updated.


**Sample Paper: On Return Seasonality**     *Fall 2019 ~ Present*
    ‣ Replicated Keloharju, Linnainmaa, and Nyberg (2016)'s work using Korean stock return data and found strong return seasonalities as well.     *Seoul, Korea*
    ‣ 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 <u>pre-IPO (Initial Public Offering) corporations' news coverage</u> on stock exchange trends in the market upon public offering.
    ‣ Researched the influence of <u>media tone (mainly press comments) and analysis perspective</u> 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

**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 3rd 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 4th 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

**Ministerial (Byeongseh Yoon) Award,** *Dec. 2016*
Ministry of Foreign Affairs *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** *May. 2016*
Ministry of Foreign Affairs *Seoul, Korea*
‣ For excellence in departmental duties.

**Grand Prize** *Oct. 2019*
Kyung Hee University, Education Innovation Center *Seoul, Korea*
‣ For excellence in research paper publication
‣ Awarded scholarship by the amount of $250

**Academic Student Scholarship (Junior year)** *Jul. 2018*
Kyung Hee University *Seoul, Korea*
‣ For excellence in thesis publication
‣ Award Amount: $1,000

**Superiority Scholarship (All Semesters of Enrollment)** *Mar. 2014 ~ Present*
Kyung Hee University *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)** *Nov. 2018*
Kyung Hee University *Seoul, Korea*
‣ For excellence in an academic portfolio in all Kyung Hee University departments.

# TECHNICAL SKILLS

**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

**Obyung Kwon** Phone:
Professor Email: obkwon@khu.ac.kr
Kyung Hee University Web:

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

Phone:
Email: tahn@deepsearch.com
Web:

**Alpha Beta**
Professor
(직위)
Kyung Hee University

Phone:
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