



# Soyoung Cho

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"To Make Each Day Count"

## Education

### Kwangwoon University

SENIOR STUDENT IN INFORMATION CONVERGENCE, MAJOR IN DATA SCIENCE

- Major GPA of 4.35 / 4.5, Total GPA of 4.32 / 4.5

Mar. 2017 - Feb. 2021 (Expected)

Seoul, S.Korea

## Publications

### DOMESTIC

- 2020 **KCC2020**, Jonghyeok Park, **Soyoung Cho**, Jonghyeok Lee, Hyuntae Lim, Yungyung Cheong.

*Detection of Illicit Drug Selling Tweets Using Phoneme Separation and Machine Learning Algorithm*

KIISE

- 2020 **KCC2020**, Jihwan Lee, **Soyoung Cho**, Jeongwon Kwak, Dongyoung Kim, Yeongseo Kim, Jaesung Park.

*Hyper-parameter Optimization for Neural Machine Translation on Korean-English*

KIISE

## Internships

### Intelligence Information Convergence Lab of ETRI

SUMMER RESEARCH INTERN

July. 2020 - Aug. 2020 (Expected)

Bundang, S.Korea

- Currently working on bearing fault diagnosis project - [Related Article](#)
- Analyzed raw data on different bearing machine environments
- Constructed and transformed data through identifying features and selecting sampling strategy
- Trained and evaluated model predicting machine fault using deep learning

## Project Experience

### Korean-English Neural Machine Translation Project

CONTRIBUTOR

Jan. 2020 - June. 2020

Seoul, S.Korea

- Capstone design project based on the transformer model of OpenNMT open-source framework
- Using a Korean-English parallel corpus opened in AI Hub which I participated in building the corpus, eventually helped to understand the data
- Improved the performance of the model in the BLEU score by 33.5 with sampled test data through changing the methods of preprocessing, tokenization and tuning hyper-parameter(manual search)
- Submitted short paper at KCC2020 as a co-author

### Smishing Message Detection Project

CONTRIBUTOR

Jan. 2020 - Feb. 2020

Seoul, S.Korea

- Joined the 'Financial SMS Phishing Message Classification' competition hosted by the KB Finance
- Achieved 97% of accuracy but was found to be the type 2 error, classifying whole data as normal data due to the skewness in data
- Willing to study the solutions of imbalanced text data problems

### Undergraduate Research, Data Mining Lab

UNDERGRADUATE RESEARCHER

June. 2019 - Feb. 2020

Seoul, S.Korea

- Researched Natural Language Processing (NLP) algorithms for information extraction and sentiment analysis in tour reviews
- Built dataset through crawling Agoda websites' reviews and organizing the clauses modifying nouns

### 2019 International AI World Cup (Hosted by KAIST)

TEAM LEADER, PRESENTER

Sep. 2019 - Nov. 2019

Indiana, U.S.A

- Won the 1st prize(\$4000) in 'AI Commentator' part
- Built a rule-based robot simulation soccer automatic commentary model with team members
- Defined the available situations in the robot simulation soccer as specific as possible, built, and tuned commentary scripts
- Part of the 'K-SW Purdue Univ. Capstone Program' organized by the IITP(Institute for Information and Communications Technology Promotion)

## Drug Selling Illicit Tweets Classification Project

Mar. 2019 - Aug. 2019

TEAM LEADER, CONTRIBUTOR, PRESENTER

Seoul, S.Korea

- Won the 2nd prize in 'Drug Safety Management Contest using Big-data' hosted by KIDS through an approach to improve illicit tweet detection
- Applied an ensemble model methods with recombining separated Korean letters to improve classification performance
- Experienced the whole process of machine learning through building datasets, analyzing, preprocessing, and modeling
- Submitted short paper at KCC2020 as a co-author

## Awards & Honors

### AWARDS

2020	<b>1st Place, People's Choice Award</b> , 5G based ICT Convergence Idea Contest	KICS, SKT
2019	<b>1st Place</b> , AI World Cup 'AI Commentator' World Final	KAIST
2019	<b>Selected Participant as School Representative</b> , K-SW Purdue University Capstone program	IITP
2019	<b>2nd Place</b> , Drug Safety Management Contest Using Big Data	KIDS
2019	<b>Dean's List</b> , for Academic Excellence	Kwangwoon Univ.
2018	<b>3rd Place</b> , 19th English Essay Contest	Kwangwoon Univ.
2018	<b>2nd Place</b> , AI based English Translation National Contest	Kwangwoon Univ.
2018	<b>Dean's List</b> , for Academic Excellence	Kwangwoon Univ.
2017	<b>Advance to the Finals</b> , Air Traffic Big Data Idea Contest	KAC
2017	<b>3rd Place</b> , IoT Smart Software Competition	Kwangwoon Univ.
2017	<b>1st Place</b> , English Contest awarded by the President of Kwangwoon University	Kwangwoon Univ.

### HONORS

2020	<b>Software Excellence Scholarships</b> , awarded to students with excellence in software	Kwangwoon Univ.
2020	<b>Honors Scholarships</b> , awarded to qualified students with outstanding efforts	KRX Foundation
2019	<b>Honors Scholarships</b> , awarded to qualified students with outstanding efforts	Emons Furniture
2019	<b>Software Excellence Scholarships</b> , awarded to students with excellence in software	Kwangwoon Univ.
2018	<b>Semester High Honors</b> , awarded to students with high achievements throughout the semester	Kwangwoon Univ.
2018	<b>Software Excellence Scholarships</b> , awarded to students with excellence in software	Kwangwoon Univ.
2017	<b>English Excellence Scholarships</b> , awarded to students with excellence in English	Kwangwoon Univ.

## Teaching

### Object-Oriented Programming

Mar. 2020 - PRESENT

TEACHING ASSISTANT

Kwangwoon University, Seoul

- Object-Oriented Programming in Department of Information Convergence
- Answers questions in person and online, marks assignments, and will proctor exam

### D.Lab Code Academy

Feb. 2020 - PRESENT

INSTRUCTOR

Pyeongchon, Gyeonggi-do

- Taught elementary students and middle school students the basics of programming
- Covers python, scratch, and app-inventor

### Golden Bell School (Samsung Card Data Mining Education Program)

Feb. 2019 - Aug. 2019

INSTRUCTOR, ASSISTANT

Seoul, S.Korea

- Taught middle school students the notion of big data and data mining

### Software Winter School

Jan. 2019 - Feb. 2020

TEACHING ASSISTANT

Kwangwoon University, Seoul

- Short courses of Python Programming, C Programming in Software Convergence College
- Assisted in programming practice, answered questions in person, and proctored exams

## Extracurricular Activity

### Kwangwoon University Student Council Emergency Committee

Jan. 2020 - PRESENT

PR TEAM LEADER

Kwangwoon University, Seoul

- Leading PR Team to promote and advertise student council's businesses and events

## Software Convergence College Student Council

PR TEAM MEMBER, LEADER

- Planned Software Convergence College student council's tasks and volunteered off-site
- Led PR Team to promote and advertise student council's businesses and events on-line and off-line

*Jan. 2018 - Dec. 2019*

*Kwangwoon University, Seoul*

## CoVong (Coding Volunteer Group of Kwangwoon University)

MEMBER

- Joined the university student education donation program in 2018 & 2019, hosted by the Ministry of Education
- Taught middle school students app-inventor programming as part of KT education program

*Mar. 2018 - Aug. 2019*

*Kwangwoon University, Seoul*

## AI Hub Korean-English Parallel Corpus Construct Project

CONTRIBUTOR (TRANSLATOR)

- Participated Korean-English Machine Translation Post Editing Parallel Corpus project managed by ETRI
- Currently uploaded at AI Hub Website

*Mar. 2018 - Aug. 2019*

*EVERTRAN, Seoul*

## Skills

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**Programming** C, Java, Python, R, MySQL, Android

**Deep Learning** Pytorch, Keras

**Data Analysis** Numpy, Pandas, Matplotlib, seaborn, gensis, scikit-learn, Spark

## Language Proficiency

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**Fluent in English, Native in Korean**

- 2020.06 – TEPS 455
- 2020.04 – OPIC AL
- 2019.08 – TOEIC 970