



# 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**, Soyoung Cho, Jonghyeok Park, Jonghyeok Lee, Hyuntae Lim, Yungyung Cheong.

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

KIISE

- 2020 **KCC2020**, Soyoung Cho, Jihwan Lee, 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

- Participated in bearing fault diagnosis project *Related Article*
- Analyzed(EDA) raw serial sensor data of different bearing machine environments
- Processed and transformed data, studied and applied AutoML, built simple deep learning model for multi-label classification

July. 2020 - Aug. 2020

Bundang, S.Korea

### Undergraduate Research, Data Mining Lab

UNDERGRADUATE RESEARCHER

- 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

June. 2019 - Feb. 2020

Seoul, S.Korea

## Project Experience

### Korean-English Neural Machine Translation Project

CONTRIBUTOR

- Capstone design project based on the transformer model of OpenNMT open-source framework
- Used 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

Jan. 2020 - June. 2020

Seoul, S.Korea

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

TEAM LEADER, PRESENTER

- Won the 1st prize(\$4000) in 'AI Commentator' part *Related Article*
- 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' selected as school representative, organized by the IITP(Institute for Information and Communications Technology Promotion)

Sep. 2019 - Nov. 2019

Indiana, U.S.A

### Drug Selling Illicit Tweets Classification Project

TEAM LEADER, CONTRIBUTOR, PRESENTER

- 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

Mar. 2019 - Aug. 2019

Seoul, S.Korea

## 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.

## Extracurricular Activity

### Kwangwoon University Student Council

Jan. 2018 - June. 2020

#### PR TEAM LEADER

Kwangwoon University, Seoul

- Planned Software Convergence College student council's tasks and volunteered off-site (2018-2019)
- Led Software Convergence College PR Team (2019) and Student Council Emergency Committee PR Team (2020) to promote and advertise student council's businesses and events on-line and off-line

### Teaching Experiences

Jan. 2019 - June. 2020

#### TEACHING ASSISTANT AND INSTRUCTOR

Seoul

- Teaching Assistant in Object-Oriented Programming course in Department of Information Convergence (Mar. 2020 - June. 2020)
- Taught students as an instructor in D.Lab Code Academy, covered scratch and app-inventor programming (Aug. 2019, Feb. 2020)
- Assisted teaching middle school students the notion of big data in Samsung Card Data Mining Education Program (Feb. 2019 - Aug. 2019)
- Tutored Software Convergence College students in Python Programming, C Programming courses (Jan. 2019 - Feb. 2019)

### Deep Learning Principle Study Group

Jan. 2020 - Feb. 2020

#### GROUP MEMBER

Seoul

- Joined a study group studying basics of deep learning with mathematics
- Implemented nodes from scratch using numpy and pandas, read papers

### AI Hub Korean-English Parallel Corpus Construct Project

Mar. 2018 - Aug. 2019

#### CONTRIBUTOR (TRANSLATOR)

EVERTRAN, Seoul

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

## Skills

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

**Deep Learning** Pytorch, Keras

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

## Language Proficiency

### Fluent in English, Native in Korean

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