

# Soyoung Yoon

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## RESEARCH INTEREST

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Natural Language Processing, Machine Learning, Social Computing, Software Engineering

## EDUCATION

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### University

Korea Advanced Institute of Science and Technology (**KAIST**), Daejeon, South Korea

Bachelor of Computer Science

Feb. 2016 ~ Feb. 2021 (expected)

### Major course

Discrete Mathematics, Data Structure, Programming Principles, System Programming,  
Linear Algebra, Computer Organization, Algorithms, Operating Systems, Computer Vision,  
Programming Languages, Text mining, Machine Learning, Natural Language Processing

### Other courses

General Physics I/II, Biology, Chemistry I/II, Calculus I/II, Introduction to Programming,  
Operations Research, Understanding Music and the Brain, Cell Biology, Understanding  
Music & Music History

### GPA

Total: 3.72/4.3, (Major only: 3.86/4.5)

GPA of each semester: 3.37(Spring 2016) -> 3.17 -> 3.6 -> 3.78 -> 4.13 -> 3.77 -> 4.06  
(Spring 2020)

## SKILLS

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### English Proficiency Tests

TOEIC (by ETS), 980

Feb. 2018

TOEFL, 108

Nov. 2018

### Programming Languages

Python, Matlab, Scala, C, JavaScript (Vue.js)

## MAJOR PROJECTS

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### Pintos (KAIST Course Projects)

Spring 2018

I went through Pintos projects for the Operating System course in Spring 2018.

**MadCamp** (<https://www.madcamp.io>)

Summer 2018

I conducted 5 projects per week, mainly focusing on mobile app development, web programming based on Flask, Gan-based machine learning projects using TensorFlow.

**Software Engineer Intern, AITRICS** (<https://www.aitrics.com>)

Jan. 2019 ~ Aug. 2019

I worked as a front-end and back-end server engineer, conducting hundreds of data per minute, using Django-Rest Framework and Vue.js.

Major contributions:

- Profiled the speed of services by using Django-silk and Django-debug-toolbar. Optimized SQL queries for big amounts of input data using Django ORM.
- Implemented functions (Giving alarms at appropriate time, Calculating individual patient's medical score using celery and celery-beat and etc) needed for the VitalCare product dashboard UI
- Made current products service well with newly made machine learning models
- Applied Recurrent Neural Network models to the inference server and computed the cosine similarity between real-word and trained data distributions
- Implemented test functions using pytest and python hypothesis
- Implemented dashboard UI by Vue.js (front-end)
- Mainly implemented patient's vital sign graph by using echarts (front-end)
- In charge of the front-end and back-end part of the VitalCare product

Site: <https://www.aitrics.com/>

## ACCOMPLISHMENTS

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**Conference presentation talk at PyCon Korea 2019**

Aug. 2019

Title: Django query optimization for medical AI data processing  
([pycon.kr/program/talk-detail?id=42](http://pycon.kr/program/talk-detail?id=42))

Slide: <https://www.slideshare.net/SoyoungYoon11/pycon-presentation-final>

Video: <https://www.youtube.com/watch?v=HpMYWk566OA>

**Received National Graduate Science & Technology Scholarship**

2018

Won ~\$500 for a semester (Merit-based scholarship)

**Finalist @ Power of xx** <http://www.powerofcommunity.net/>

2018

Participated as one of the members of Power of xx team.

**Conducting Mock Hacking Outsourcing for Hunesion Products**

2018

Found two important vulnerabilities in their secure software and provided them with solutions.

**Finalist @ Power of xx** <http://www.powerofcommunity.net/>

2017

## **EXTRACURRICULAR ACTIVITIES&EXPERIENCES**

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### **A member of CONNECT Translating Supporters**

2018

Translate English online programming & algorithm video lectures into Korean subtitles.

### **Freshmen Guidance Group (Proctor)**

2018

Help a class of 31 freshmen students adapt well with academic work and campus life as a class leader.

### **Instructor on Samsung Dream Class Camp**

Jan. 2018 ~ Feb. 2018

Teach middle-school students about Math, English, and guides their living.

### **KAIST Buddy Program**

Sep. 2017

Help international exchange students adapt well with KAIST school work and Korean life.

### **KAIST GoN team**

Mar. 2017 ~

GoN is a KAIST hacking & security club that study hacking and participate in CTF.

### **KAIST pop band Carpe Diem as a female vocalist**

Mar. 2016 ~

EPGY @ **Stanford Univ**, <https://summerinstitutes.spcs.stanford.edu/>

Jul. 2010

EPGY stands for Education Program for Gifted Youth

Participated at Computer Science Subjects.

## **RESEARCH EXPERIENCES**

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### **Individual study at KAIST U&I lab** (<https://uilab.kaist.ac.kr>)

Sep. 2019 ~

Advisor: Sungjoon Park (<https://sungjoonpark.github.io/>)

### **URP(Undergraduate Research Project)**

Jan. 2020 ~

Research on Grammatical Autocorrection for Korean via fine-tuning pre-trained Language Models

Proposal for the research(In Korean): <https://soyoung97.github.io/urp.pdf>

Advisor: Sungjoon Park, Alice oh