

## Education

**Tilburg University** – B.S., Cognitive Science & Artificial Intelligence  
08/2018 – present

Relevant Coursework	Human-Computer Interaction, Statistics for CSAI, Information Search, Language Cognition & Computation
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**New York University Shanghai** - B.S., Computer Science  
08/2015 – 05/2017 (completed 2<sup>nd</sup> year)

Honors	Dean's List for Academic Year (2015-2016)
Relevant Coursework	Computer Architecture, Data Structures, Machine Learning, Probability and Statistics, Interaction Lab, Introduction to Computer Science

## Work Experience

**AI Spera** – Jr. Software Engineer

03/2018 – present

- Developed several data collectors and analyzers
- Developed a scoring algorithm for malicious IP detection with DNS information
- Was in charge of backend development with AWS Services including API Gateway, Lambda, DynamoDB, S3, CloudWatch, and CloudTrail.
- Collaborated in the project FraudAccount, which tells if a given phone number of bank account is suspected for fraudulent use
- Implemented automatic deployment of services with Rundeck
- Researching, implementing, and managing security-relevant software

**Surromind Robotics** – Software Engineer Intern

07/2017 – 02/2018

- Developed an Attributes Extractor, a core training part of Smart Dialogue agent in chatbot to extract relevant queries from input message, using co-occurrence Hyper-Networks
- Preprocessed data for QA(Question-Answering) engine development and analyzed the results.

## Project

**PISA** – Web app that removes people in the background of an input photo

11/2019 (JacobsHack)

- Created a website using Python flask, HTML, CSS, and Javascript.
- Used DeepLab model for semantic segmentation of humans, and partial convolutions for image inpainting.

**AlbaLaw** – Labor Law Consultant Bot in South Korea

09/2017 – 09/2018 (NYU Social Entrepreneurship Program)

- Developed a chatbot and QA system in it
- Designed the whole system architecture and managed the servers

**InstaBoost** – Like Counts Predictor for Instagram Users

03/2017 – 05/2017 (Machine Learning Final Project)

- Developed an Instagram like predictor by analyzing RGB values, concept of photos, average like counts of the user's posts, and follower counts with K-means clustering and Random Forest.

**SMOG** – First-person view Shooting Arcade Game

04/2017 – 05/2017 (Interaction Lab Final Project)

- Used Processing and Arduino to develop the game.
- Designed a gun in Tinkercad and 3D printed it.

Github: <https://github.com/SonghaBan>

## Publication

Ban, S., & Kim, B.-H. (2017). Unsupervised Human Segmentation with Cycle Consistent Adversarial Networks. *Proceedings of Korea Software Conference*, 12. 1992-1994. [In Korean]

## Recognition

**Korea Software Conference 2017**

**Undergraduate Research Competition**

[1<sup>st</sup> place]

Korean Institute of Information Scientists and Engineers

**Changemaker Challenge 2017**

[Seed Grant Winner]

NYU Social Entrepreneurship Program

**JacobsHack 2019**

[Winner selected by domain.com]

Major League Hacking

## Skills

**Programming**

Working knowledge: Python, Java

Basic knowledge: C/C++, HTML, CSS, Javascript

**Machine/Deep Learning**

Tensorflow, Keras, Scikit-Learn

**Software**

Android Studio, Arduino, Processing, FinalCut

## Languages

English (fluent), Korean (native),

Chinese (intermediate), Japanese (basic)