# Songha Ban

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#### **EXPERIENCE**

# **Al Spera** — Software Engineer

03/2018 - PRESENT

- Developed several data collectors and analyzers
- Developed a scoring algorithm for malicious IP detection
- Developed parts of FraudAccount, which tells if a given phone number or bank account is suspected for fraudulent use
- Was in charge of backend development with AWS Services including API Gateway, Lambda, DynamoDB, S3, CloudWatch, and CloudTrail.
- Developed parts of a security platform such as DarkWeb tracking and port scanning

# **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.

#### **EDUCATION**

**Tilburg University** — *B.S., Cognitive Science & Artificial Intelligence* 08/2018 - present (Expected 08/2021)

# **New York University Shanghai** — B.S., Computer Science

08/2015 - 05/2017 (completed 2 years) Honors: Dean's List for Academic Year (2015-2016)

# **PROJECTS**

# **Dancing Al** — Bachelor Thesis Project

- Developed a GAN framework to generate dance from music
- Improved performance with music feature generator that regenerates encoded music features from generated dance

# **Texcellence** — Software Engineering Project

- Developed an Al-based meeting secretary
- Used OpenNMT for the translation model.
- Deployed the backend on AWS EC2 and used ROUTE53 to link a domain.

#### **PISA** — Jacobs Hack

- Used DeepLab model for semantic segmentation of humans, and partial convolutions for image inpainting

#### Social Touch Classification

- Used SRP and CNN to extract features from the Corpus of Social Touch (CoST) and classify gestures.
- Experimented with different algorithms and deep learning models such as PCA, Random Forest, AutoEncoder, and LSTM

# **AlbaLaw**— NYU Social Entrepreneurship Program

- Developed a labor law consultant bot for South Korean workers
- Developed a chatbot and QA system in it

#### **InstaBoost**— Machine Learning Project

- Developed an Instagram like predictor by analyzing images, concepts, and user information

#### **SKILLS**

**Working Knowledge**: Python, Java, SQL

**Basic Knowledge**: C/C++, Javascript

Machine/Deep Learning: PyTorch, Tensorflow, Keras, Scikit-Learn

Cloud: AWS

#### **AWARDS**

Korea Computer Congress 2020 Undergraduate Research Competition [2nd place] Korean Institute of Information Scientists and Engineers

# JacobsHack 2019 [Winner selected by

domain.com] Major League Hacking

**Changemaker Challenge 2017** [Seed Grant Winner]

NYU Social Entrepreneurship Program

Korea Software Conference 2017 Undergraduate Research Competition

[1st place] Korean Institute of Information Scientists and Engineers

# **PUBLICATIONS**

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

**S. Ban**, N. Doan, R. Kole, M. Zeegers, G.Kuscu. (2020). Automatic Feature Extraction for Social Touch Classification. Proceedings of Korea Computer Congress, 1522-1524