Junbong Jang

263 Highland St, Holden, MA 01520, USA · Cell: (399) 234-3337 · Email: Junbong.Jang@childrens.harvard.edu

OBJECTIVE

Research deep learning in the graduate school of Artificial Intelligence at KAIST

EDUCATION

Worcester Polytechnic Institute (WPI), Worcester, MA

Bachelor of Science in Computer Science, GPA: 3.8/4.0   December 2019

RELATED EXPERIENCES

Research Assistant II, Boston Children's Hospital, Dr. Kwonmoo Lee   October 2020 - Current

Research Associate, WPI, Dr. Kwonmoo Lee   February 2020 - October 2020

- Develop a deep learning-based segmentation pipeline for live cell time-lapse images using multi-microscopy datasets.
- Collaborate with University of Massachusetts Medical School to screen adequacy of the Fine Needle Aspiration samples from thyroid nodule patients using object detection algorithm, Faster-RCNN.
- Cluster-based epidemiological modeling for county-level COVID-19 risk assessment analysis in the United States using SIR model and UMAP clustering.

Undergraduate Thesis, WPI, Dr. Dmitry Korkin   June 2019 – December 2019

- Joint Neuroscience Research with McLean Hospital to understand and diagnose mental illness and suicidality from clinical and MRI data.
- Developed a diagnosis pipeline with a machine learning method, random forest.
- Discovered significant factors contributing to depression, dissociative disorder, or suicidal ideation by recursive feature elimination.
- Diagnosed suicidality with 85% accuracy using the clinical dataset and diagnose depression, dissociative disorder, and PTSD with 90% accuracy using the MRI dataset.

Research Assistant, WPI, Dr. Neil Heffernan   August 2018 - August 2019

- Built the automated data analysis library for educational science researchers who use ASSISTments online education platform.
- Analyzed factors that significantly influence student's performance by statistical methods such as ANOVA and MANOVA.
- Designed and developed a web application with the FLASK web framework and integrated with Google Spreadsheet API so that users can interactively work with data.
- Received and parsed data from MySQL server, and sent visualization of the analysis to a user's Google Docs.

ADDITIONAL EXPERIENCE

Full Stack Web Developer, WellEastern Inc, South Korea   May 2018 - August 2018

- Built educational web application for English as a second language K12 students in South Korea using HTML5, CSS3, Javascript, typescript, Bootstrap, and Angular Framework.
- Wrote REST API in PHP to communicate with the web application and save students' progress.
- Integrated Google speech recognition API in Chrome with the web application to grade students' pronunciation as they read books online.
- My speech recognition web application saved the cost by $2000/month that was spent using paid speech service.

TEACHING EXPERIENCES

Biological Data Mining, WPI   October 2019 - December 2019

- Taught machine learning methods and development of neural network model in Python
- Helped individual students with homework problems and projects.

Systems Programming Concepts, WPI   August 2019 - October 2019

- Taught programming in C/C++ and test-driven development
- Supervised weekly labs and graded homework.

AWARDS & FUNDING

$94,500 Merit Scholarship, WPI   August 2016 - December 2019