KYUHEE JO

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EDUCATION

Johns Hopkins University, Baltimore, MD; Graduating May 2023
   B.S. Computer Science, Applied Math and Statistics, **GPA 3.93/4.0 (Dean's list)**
Activities: Google CS Research Mentorship, Peer tutoring leader (Linear Algebra, Discrete Mathematics)

SKILLS

Programming Languages: Python, Java, C/C++, JavaScript, MATLAB, R
Technologies: Git, Docker, Unix/Linux, Node.js, HTML/CSS

EXPERIENCE

Machine Learning Intern <Python, PyTorch, Pandas, Docker, SQL>   Seoul, South Korea
Lunit, Mammography Research Team   *May – Aug 2021*
- Adapted Vision Transformer, an attention-based deep learning model, for a breast cancer prediction task.
- Enhanced model accuracy by 10% with only 0.1% of labels available using self-supervised learning.
- Expedited data processing by developing data cleaning scripts for internal and open-source databases.

Machine Learning Intern <Python, Tensorflow, Keras, MATLAB>   Seoul, South Korea
Healthhub AI Research Center   *June 2020 – Jan 2021*
- Invented an automatic joint detection algorithm; reduced the cost for attaining a knee-joint dataset by 90%.
- Achieved 5% improvement in liver tumor segmentation by supplementing model with a region of interest.

Data Science Intern <R, Excel>   Seoul, South Korea
UN International Vaccine Institute   *Dec 2019 – Jan 2020*
- Gathered and cleaned raw data that illustrates the delivery cost of MR vaccine in India.
- Evaluated differences between top-down and ingredient-based cost using R statistical analysis.

Course Assistant (Gateway Computing: Python, Intermediate Programming)   *Jan 2021–Present*
- Guided 140+ students through class materials on Python and C/C++ during weekly office hours.
- Graded and provided constructive feedback on student assessment and projects.

PROJECTS

Android App for the Visually Impaired <Python, Tensorflow, Java>   *Project Lead, Sep 2021*
Winning project for HopHacks 2021 ($1,028)
- Developed scene description, obstacle detection, and OCR features with Azure Vision API, Google Cloud API, and ML kit; Achieved hands-free control using text-to-speech and speech-to-text API.
- Trained and deployed attention-based image captioning model using Tensorflow and Flask backend.

iOS App for Personalized Event Curation <Python, Objective-C>   *Project Lead, Jan – June 2020*
- Used Beautiful Soup and Selenium to scrape and curate events according to users' schedule and preference.
- Constructed an interactive, user-centered UI/UX design through direct engagement with 20+ users.

Web app for Hospital Schedule Optimization <Java, HTML/CSS> *Full Stack Developer, Mar – Aug 2021*
- Streamlined operating room scheduling process by deploying Tabu Search Algorithm with Java.
- Designed and developed a user-friendly web application using Spring Boot and HTML/CSS.

Computer Vision for Medical Image Analysis <Python, Tensorflow>   *Researcher, Jan 2021 – Present*
- Applied self-domain adaptive network on MRI images to facilitate domain invariant segmentation.
- Validated performance of an attention based recurrent neural network for surgical video skill assessment.

AWARDS

1st Place Overall/45 teams ($1,028), Hophacks Fall 2021   Sep 2021
3rd Place/140 competitors from 39 countries ($4,100), EU contest for Young Scientist   Sep 2018
3rd Place/90 teams ($1,000), JHU Business Plan Competition   Feb 2021