Soojin (Rachell) Lee

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EDUCATION

Carnegie Mellon University   **Pittsburgh, PA**
Master of Science in Electrical and Computer Engineering   *December 2024*
- *Current Coursework*: Networks in the Real World, Computational Foundations for Machine Learning, Communications for Software Leaders

Sejong University   **Seoul, KR**
Bachelor of Science in Computer Engineering   *August 2023*
- *CGPA*: 4.25/4.5 (CS GPA: 4.31)
- *Awards*: Honors Scholarship, Language Honors Scholarship, Global Internship Scholarship Award, Teaching Assistant Scholarship, Outstanding Capstone Project Award

SKILLS

- **Programming Languages:** *Advanced* - Python, JAVA, C, C++, HTML/CSS/Javascript, React Native; *Intermediate* - Tailwind, MySQL/SQLite, MFC, R
- **Framework/Tools:** Flask, PyTorch, TensorFlow, Git/Github, Asana, Notion, VS Code, PyCharm
- **Data Science:** Pandas, Numpy, Scipy, Scikit-learn

WORK EXPERIENCE

Cipherome, Inc   **San Jose, CA**
Software Engineer Intern   *March 2022 - March 2023*
- Selected as one of the top 20 outstanding university students in Korea to participate in a government-sponsored internship program
- Researched machine learning methods on genomic and medical data and constructed software for company's medical AI platform empowering personalized medications to limit adverse drug reactions
- Led a project investigating risk factors associated with Chronic Obstructive Pulmonary Disease and this project selected as a showcase study, the company signed MOU with Seoul National University Bundang Hospital Biomedical Research Institute

RESEARCH EXPERIENCE

Quantitative Imaging and Informatics Laboratory (QUIIL)   **Seoul, KR**
Undergraduate Researcher   *September 2021 - March 2022*
- Researched machine learning models for classifying stages of cancer with Prof. Jin Tae Kwak
- Developed computer vision algorithms by utilizing neural networks based on backbone of ResNet / EfficientNet for classifying peritoneal cancer images into five stages of cancer
- Ranked top 5 in a National Pathology Health Datathon held by National Cancer Center for developing machine learning models to diagnose cancer by applying pathology images of cancer cells

PROJECTS

Cervical Cancer Detection using Deep Learning – Carnegie Mellon University   *Present*
- Developing a deep learning algorithm to segment cells from cytology images and classify stages of cancer
- Researching SOTA methods on image segmentation with Prof. Marios Savvides

SejongMate – Sejong University   *Spring 2023*
- Implemented a chatbot app that enables students to access school-related information and engage in real-time communication with professors through class chatrooms
- Crafted a cross-platform application utilizing React Native, coupled with design of REST API for seamless communication with backend systems and AI model

PUBLICATIONS

Soojin Lee, Ingu Lee, and Samuel Kim, "[Predicting Development of Chronic Obstructive Pulmonary Disease and its Risk Factor Analysis](#)" in IEEE Engineering in Medicine and Biology Society (EMBC) 2023, accepted for oral presentation in April 2023, selected as the highlighted paper from UKBiobank Research Analysis Platform video.
Byeongjun Seo, **Soojin Lee**, Ingu Lee, and Samuel Kim, "[Analysis of Ticagrelor and Prasugrel Correlation with CYP2C19 Genetic Variants as Alternative Drugs for Clopidogrel](#)" in American Society for Clinical Pharmacology and Therapeutics (ASCPT), accepted to be published in March 2023.