KATHLEEN SUCIPTO

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SELECTED WORK EXPERIENCE

PathAI, Inc. Boston, MA
Machine Learning Engineer (formerly titled Biomedical Engineer) Feb 2021 – Present

- Collaborated closely with pathologists, product managers, and biomedical data scientists to develop models for analyzing pathology images, including but not limited to:
  - A masked-attention mask transformer-based model, leveraging our foundation model as the backbone, to segment multiclass cell nuclei that achieved F1 scores on par with pathologists' performance
  - A multi-task graph neural network that uses tissue and cell predictions to generate graphs for classifying multiple disease severity grades at the slide level
- Obtained internal code readability reviewer certification that demonstrates one's understanding of the company's coding best practices
- Joined the codebase stewardship team, responsible for implementing, reviewing, refactoring, and optimizing the end-to-end graph neural network pipeline
- Led cross-departmental efforts to optimize the generation of human-interpretable features from tissue and cell predictions, reducing the latency by approximately 7x from several days to just a few hours
- Mentored a summer intern in designing a novel graph generation method, which was subsequently integrated and platformized into the codebase

Zitnik Lab, Harvard Medical School Boston, MA
Capstone Project: denoising biological networks with graph neural networks Sept 2020 – Dec 2020

- Implemented PyTorch-based biased dropout on a weighted graph that can be added on top of any graph neural network model to alleviate the graph reliance on noisy edges

Huttenhower Lab, Harvard T.H. Chan School of Public Health Boston, MA
Research Intern May 2020 – Aug 2020

- Developed HAllA, a Python-based software that identifies significant associations between features in paired high-dimensional multi-omics datasets using a hierarchical clustering approach
- Ensured unit tests and documentation were included

Imsight Medical Technology Company Limited Hong Kong
Software Engineer Nov 2017 – Sept 2018

- Developed end-to-end cancer detection web applications, enabling users to upload whole-slide pathology images, run deep learning models, and visualize predicted cancer regions directly on the images
- Built and maintained a scalable Python Flask and JavaScript-based labeling platform using AWS EC2 and S3 storing more than 4,000 whole slide images at the time
- Assisted the product managers in designing the software requirements

EDUCATION

Harvard Medical School March 2021
Master of Biomedical Informatics, cumulative GPA: 3.984/4.000

Hong Kong University of Science and Technology (HKUST) Nov 2016
BEng in Computer Science, CGA: 3.959/4.300
Honors: First Class Honors Degree, Academic Achievement Medal Awardee

SKILLS

Programming : Python (NumPy, scikit-learn, PyTorch, pandas), R, JavaScript, HTML, CSS
Language : English (Proficient), Mandarin (Intermediate), Bahasa Indonesia (Native)