Grace (Unnseo) Park

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EDUCATION

Carnegie Mellon University, School of Computer Science Pittsburgh, PA
Master of Science in Computer Science *Expected Graduation: May 2025*
Bachelor of Science in Artificial Intelligence *May 2024*
Coursework: Intro to Deep Learning, Natural Language Processing, Algorithm Design and Analysis, Intro to Product Management, Intro to Machine Learning, Computational Perception, Modern Regression, Functional Programming

WORK EXPERIENCE

Data Interaction Group, CMU | Research Assistant *Jan 2023 - Current*
- *"How Consistent are Clinicians? Evaluating the Predictability of Sepsis Disease Progression with Dynamics Models"* - **Presented** at 'ICLR 2024 Workshop TS4H' as the First Author (link to paper)
- Designed and trained transformer-based dynamics models, experimenting with varying hyperparameters to optimize model performance and fine-tune large models for improved accuracy.
- Developed and implemented experiments using dynamics models to evaluate the feasibility of predicting disease severity changes based on clinician actions using reinforcement learning with the MIMIC-IV dataset.
- Applied advanced data preprocessing techniques to impute missing data and prepare the dataset for modeling.

Carnegie Mellon University | Teaching Assistant *Aug 2023 - May 2024*
- Led weekly hour-long recitations with 20 students and hosted office hours, answered questions on the online message board for 15-210: Parallel and Sequential Data Structures and Algorithms.

Red Hat | Software Engineer Intern *May 2023 - Aug 2023*
- Collaborated with a diverse team of developers to enhance the OpenStackSDK Manila API, specifically focusing on integrating support for the share metadata resource.
- Successfully engaged in the open-source development environment, contributing to a large-scale project.

Cryptolab | Research Engineer Intern *July 2022 - Aug 2022*
- Implemented and compared the performance of various optimizer algorithms such as SGD, Adam, and Adagrad for regression models of homomorphically encrypted data.
- Improved the training speed of logistic regression models by 3.6% and achieved 95% accuracy.

PROJECTS

MyTorch | Course Project (Intro to Deep Learning) *2024*
- Building a custom deep learning library, similar to libraries such as PyTorch and Tensorflow.
- Implementing components that comprise Multilayer Perceptron (MLP), Convolution Neural Network (CNN), Recurrent Neural Network (RNN) and Masked Self Attention

Anyways… | Hackathon Project (TartanHacks) *2023*
- Programmed a software tool in Python to help users stay on topic in group discussions by saying "anyways…"
- Designed an algorithm for detecting off-topic sentences using keyword similarity which achieved 90% accuracy.
- Uses real time speech-to-text technology and keyword analysis using the spaCy natural language processing library.

LEADERSHIP

CMU Korean Student Association | Board Member *Sept 2021 - May 2024*
- Planned and organized monthly events to promote Korean culture and history.

AI MakerSpace, CMU | Undergraduate Assistant *Sept 2021 - May 2022*
- Set up various robots such as Misty and Kinova robotic arm in the AI makerspace and prepared for opening.
- Constructed manuals and descriptions on how to use each robot and provided support for students using the resources.

SKILLS

Programming Languages: Python, C/C++, SML, R, Java
Technologies: LaTeX, Git, Vim, Unix, Pytorch
Languages: English (Fluent), Korean (Fluent), Spanish (Intermediate), Russian (Beginner)