Carter Perkins

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Education

New York University Sep 2021 – May 2023

Master of Science in Computer Science

Focus Areas: Machine Learning, Deep Learning, and Natural Language Processing

University of Oregon Sep 2017 – Jun 2021

Bachelor of Science (GPA: 3.62)

Double Major: Computer & Information Science (Departmental Honors); Mathematics

Thesis Title: *Ranking Cryptocurrency Exchanges by Trustworthiness* (Advisor: Jun Li)

Experience

Lowd Group, University of Oregon Eugene, OR

Undergraduate Researcher Sep 2020 - Present

- Trained a multi-class RoBERTa sentiment model for subjective climate change tweets with 83% accuracy using PyTorch and transformers.
- Generated adversarial attacks against classification models using the TextAttack, OpenAttack, and scikit-learn libraries.

High-Performance Computing Lab, University of Oregon Eugene, OR

Undergraduate Researcher Aug 2020 - Present

- Trained a seq2seq transformer for translating regular expressions into English phrases by writing a parser in PLY and using libraries such as scikit-learn and transformers.
- Built MySQL database to handle storing of extreme-scale application software Git repositories, issues, pull requests, and event activity history via Django.
- Filtered from 40,000 emails to 800 containing PETSc stack traces and utilized keyword pattern recognition to tag emails.

Computer & Information Science Department, University of Oregon Eugene, OR

Learning Assistant Mar 2021 - Jun 2021

- Assisted graduate students in learning data science topics such as: data wrangling, KNN, Naive Bayes, and neural networks by answering in question class and holding weekly office hours.

Center for Cyber Security and Privacy, University of Oregon Eugene, OR

Undergraduate Researcher Jun 2019 - Jun 2020

- Created a decentralized online social network system by designing a modular software architecture using tools such as IPFS, WebRTC, and Django.
- Implemented a task management system to optimize middleware module interactions by developing asynchronous threads for core tasks.
- Standardized deployment environment by wrapping the application in a multi-container Docker system consisting of Python, Node.js, and PostgreSQL images.

Projects

Web-based Geospatial Data Collector and COVID-19 Smart Planning

- Along with five other students, built a web-based geospatial data collection service for participants in order to build a class-wide aggregate dataset mapping pedestrian traffic during quarantine. From this, we built a second project where we created a smart scheduling and location query service to find the most optimal time to visit a location based on the predicted number of pedestrians in the area. Built with Python, MySQL, jQuery, and Google Maps API. Both projects earned the top score in the class.

Skills

Languages: Python · C · C++ · MySQL · Java

Frameworks and Tools: Git · Subversion · Docker · Pandas · Matplotlib · Numpy · Scikit-learn · PyTorch