Konstantinos Kastritis

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PROJECTS

Predicting Stock Prices - kkastr/stock-price-predictions/

- Extracted 5 years of ticker data from Yahoo Finance.
- Developed a model for the time series of stock prices using LSTM neural networks.
- Optimized model performance by 20% through hyperparameter tuning.
- Generated 4 visualizations that showcased the quality of the model's predictions.

Reddit Sentiment Analysis - kkastr/reddit-sentiment/

- Collected post submissions from 5 subreddits and stored the comments in a database using Pandas.
- Designed a classification model and conducted sentiment analysis on over 25,000 comments.
- Created dashboard visualizations of 6 metrics that provided insight into the behavior of reddit users.

EXPERIENCE

Ontario Tech University - Research Associate (Part-Time) September 2021 - June 2022, Remote

- Devised pipeline for processing simulation data which improved storage efficiency by 20%.
- Designed key metrics that offered data insight which reduced overhead in data collection by 30%.
- Prepared visualizations of 8 data metrics and 3 CG illustrations for use in physics conferences.
- Maintained software used for research by 3 graduate students.

Ontario Tech University - Teaching Assistant September 2019 - December 2020, Oshawa, ON

- Directed labs and tutorials of up to 30 students in physics and computer science courses.
- Instructed a total of 40 students in Linux and Python.
- Guided a total of 7 students on coding for course projects.

Ontario Tech University - Graduate Research Assistant September 2016 - August 2019, Oshawa, ON

- Provided theoretical and data-driven insight to experimental work, and co-authored 2 publications.
- Developed research specific features and API to GPU capable simulation software that increased simulation performance by up to 50%.
- Enabled the group to transition from serial processing on clusters to GPU computing which improved productivity by 20%.
- Authored internal documentation, and trained 6 students in using custom simulation software.

SKILLS

- Python, C, C++, CUDA, SQL, Rust, Typescript, React
- Pytorch, Deep Learning, Time Series Models, NLP, Classification
- Git, Linux, Docker

EDUCATION

Ontario Tech University
Bachelor of Science, Physics, 2016
Awarded NSERC undergraduate research award.
Honors Thesis: N-Body Simulations of Dark Matter Halos

Ontario Tech University
Master of Science, Materials Science, August 2019
Thesis: Computational Studies of Semiflexible Polymer Dynamics Under Confinement.