Konstantinos Kastritis

Data Scientist

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Data Scientist with a strong foundation in physics and materials science, possessing extensive experience in machine learning, data analysis, and software development. Proven ability to extract insights from complex datasets, develop predictive models, and optimize data pipelines. Adept at leveraging Python, SQL, and visualization tools to drive data-driven decision-making. Seeking to apply analytical and technical expertise to solve challenging problems in a dynamic data science role.

Experience

Researcher

Jun 2024-Present

Ontario Tech University | Oshawa

- Implemented software functionality enabling further research with physics simulations.
- Performed data analysis for research projects.
- Completed two manuscripts in preparation for publication in peer-reviewed journals.
- Contributed to research discussion and generated insight on solutions.

Researcher

Sep 2021-Jun 2022

Ontario Tech University

- Developed and implemented data pipelines using Python, improving storage efficiency by 20%.
- Designed key metrics for data insights, reducing data collection overhead by 30%.
- Enhanced software functionality for physics simulations, enabling further research capabilities.
- Assisted graduate students in preparing for degree completion, providing technical guidance.

Teaching Assistant

Jan 2015 Dec 2020

Ontario Tech University

- Led labs and tutorials for physics and computer science courses, covering quantum mechanics and Python programming.
- Instructed 50 students in Linux and Python, focusing on file system management and data visualization.
- Provided individualized guidance for programming projects in C and Python. Jan 2015 Dec 2020

Graduate Research Assistant

Sep 2016 Aug 2019

Ontario Tech University | Oshawa

- Provided data-driven insights to experimental work, co-authoring two publications in peer-reviewed journals.
- Developed APIs using C++ and CUDA for GPU-capable simulation software, increasing performance by 50%.
- Facilitated transition to GPU computing, enhancing group productivity by 20%.
- Authored documentation and trained six students in custom simulation software.

Projects

Social Media Sentiment Analysis

- Scraped post submissions from five subreddits using Python's PRAW library and stored comments in a SQL database with Pandas.
- Developed a classification model with scikit-learn to perform sentiment analysis on over 25,000 comments, attaining an accuracy of 86%.
- Designed dashboard featuring six key metrics, including sentiment analysis by subreddit and comment volume over time, enabling data-driven insights into Reddit user behavior.

Skills

Python, C, C++, TypeScript Pandas NumPy SciPy PyTorch, React, Git, Linux, Docker, Matplotlib, Seaborn, Plotly, SQL

Education

Ontario Tech University

Aug 2019

Master of Science Materials Science

Computational Studies of Semiflexible Polymer Dynamics Under Confinement.

Ontario Tech University

Dec 2016

Bachelor of Science Physics

N-Body Simulations of Dark Matter Halos.

Awards

Undergraduate Research Award
NSERC

Languages

English *(fluent)*, **Greek** *(fluent)*