Konstantinos Kastritis
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PROFESSIONAL SUMMARY

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.

PROJECTS

Reddit Sentiment Analysis

GitHub Repository

- 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.

EXPERIENCE

Ontario Tech University

Research Associate *(June 2024 – Present)*
Research Associate *(Part-Time, Remote) (September 2021 – June 2022)*

- 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.
- Completed two manuscripts in preparation for publication, contributing to academic knowledge.
- Assisted graduate students in preparing for degree completion, providing technical guidance.

Ontario Tech University

Teaching Assistant (*January 2015 – December 2020, Oshawa, ON*)

- 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.

Ontario Tech University

Graduate Research Assistant *(September 2016 – August 2019, Oshawa, ON)*

- 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.

SKILLS

- **Programming Languages:** Python, C, C++, TypeScript
- **Technologies & Frameworks:** PyTorch, React
- **Tools:** Git, Linux, Docker
- **Data Visualization:** Matplotlib, Seaborn
- **Databases:** SQL, Pandas

EDUCATION

Ontario Tech University

Master of Science, Materials Science
August 2019

- **Thesis:** Computational Studies of Semiflexible Polymer Dynamics Under Confinement.

Ontario Tech University

Bachelor of Science, Physics
2016

- **Honors:** Awarded NSERC Undergraduate Research Award.
- **Honors Thesis:** N-Body Simulations of Dark Matter Halos.

ADDITIONAL INFORMATION

- **Publications:** Co-authored two papers in peer-reviewed journals (details available upon request).
- **Languages:** English, Greek