

Konstantinos Kastritis

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Experience

cNabLab - *Research Associate*

January 2022 - Present

- Research in polymer physics and code development.
- Train new students.

cNabLab - *Graduate Research Assistant*

September 2016 - June 2019 // Oshawa, ON

- Conducted research in polymer physics, and collaborated with various experimental physicists to provide theoretical insight into their data.
- Developed and maintained code for added functionality to molecular dynamics packages in Python and CUDA.
- Maintained and expanded internal computer network.

Ontario Tech University - *Teaching Assistant*

January 2015 - December 2021 // Oshawa, ON

- Taught a wide array of physics and computer science courses.
- Aided with increasing the amount of programming included in the physics program.

Projects

Reddit Sentiment Analysis - [kkastr/reddit-sentiment/](https://github.com/kkastr/reddit-sentiment/)

Analyze the sentiment of comments using the reddit api to scrape post data. Obtain information such as the sentiment breakdown, average sentiment per post, and more.

Predicting Stock Prices - [kkastr/stock-price-predictions/](https://github.com/kkastr/stock-price-predictions/)

Generate predictions for the closing value of securities by using Long Short Term Memory (LSTM) neural networks to model the time series of the stock price.

Brownian Dynamics in CUDA - [kkastr/cuda-brownian-dynamics/](https://github.com/kkastr/cuda-brownian-dynamics/)

Brownian dynamics written for gpus, making it easy to scale to tens of thousands of particles for faster results and better statistics on whatever physical system you wish to investigate

Skills

Programming languages

Python, C, CUDA, Typescript

Platforms

Git, Docker

Education

Ontario Tech University

Bachelor of Science - Physics

September 2012 - May 2016

Minor in Mathematics.

Awarded NSERC undergraduate research award.

Honors Thesis: N-Body Simulations of Dark Matter Halos

Ontario Tech University

Master of Science - Physics

September 2016 - June 2019

Thesis: Computational Studies of Semiflexible Polymer Dynamics Under Confinement.

Languages

Native Greek. Fluent in English.