

Kal Parvanov

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Education:

University of Colorado Boulder - Boulder, CO	Fall 2021	–	May 2024
MS <i>Applied Mathematics</i>			
Lake Forest College - Lake Forest, IL	August 2016	–	May 2020
B.A. <i>Mathematics, Economics, Summa Cum Laude, Phi Beta Kappa</i>			Cumulative GPA 3.96/4.00
Phillips Academy (Davis Scholar) - Andover, MA	September 2014	–	June 2016

Relevant Skills:

Mathematics: Multivariate Calculus, Set Theory, Linear Algebra, and Modern Algebra, Statistics and Probability. Strong foundation in **Numerical Analysis** and optimization for solving complex mathematical problems, including those related to Machine Learning.

Programming and Statistical Analysis: Skilled in Python, C++, R, Stata and SQL for data analysis, modeling, and software development. Experienced in using Git for version control and LaTeX for documentation.

Computer Science: Expertise in Graph Theory, Algorithms & Data Structures, and Optimization. Proficient in Machine Learning and Deep Learning techniques.

Research Experience:

James Rocco Quantitative Research Fellowship , Lake Forest, IL	September 2018	–	October 2020
<ul style="list-style-type: none">Worked on identifying market regime changes through various dimensionality reduction techniques (mainly PCA) using data from the S&P 500 for the past decade.			
Graduate Research in High-Dimensional Probability , Boulder, CO	May 2023	–	October 2023
<ul style="list-style-type: none">Worked on developing a probability bound for the spectral norm of a (m,p) matrix.			

Employment Experience:

Mathematics Teaching Assistant (20 HRS/WEEK) , Boulder, CO	August 2021	–	Present
<ul style="list-style-type: none">Served as the TA for Calculus I, II, IIITaught 3 50-minute recitations every week.Wrote up quizzes and graded homework for a total of 80 students.			
Mathematics Teaching Assistant (12 HRS/WEEK) , Lake Forest College, IL	August 2018	–	May 2020
<ul style="list-style-type: none">Served as the TA for Multivariable Calculus, Linear Algebra, and Calculus 2, writing up solutions to homeworks in LaTeX and holding weekly tutoring sessions to help the students better understand the material			
Data Analyst , Straight Forward Concepts, IL	June 2019	–	July 2019, August 2020 – January 2021
<ul style="list-style-type: none">Helped create a dataset of classified overhead expenses for CVS, so that a machine learning classifier model could later be trained to do this (2019)Worked on a customer segmentation analysis report for Gamestop (2021).Performed cost reduction analysis for Gamestop physical stores throughout the US (2020).Wrote various scripts that were later incorporated into the data processing pipeline for both projects (2019, 2020).			

Extracurricular Experience:

Quantitative Finance Club , Lake Forest, IL	September 2018	–	May 2020
<i>President</i>			
<ul style="list-style-type: none">Launched an <i>R</i> & <i>Python</i> boot camp through DataCamp, helping members learn the basics of quant. analysisInvited lecturers and professors as guests to talk about the current areas of industry and academic research.			
Investment Club , Lake Forest, IL	September 2016	–	May 2020
<i>Portfolio Manager</i>			
<ul style="list-style-type: none">Created a DCF model for New Age Beverages (NASDAQ: nBev) using the perpetuity growth method.			
Sailing Club , Boulder, CO	January 2022	–	present

Honors and Awards:

Omicron Delta Epsilon, Economics Honor Society
Omicron Delta Kappa, National Leadership Honor Society
Phi Beta Kappa, National Honor Society
Shelby Cullom Davis Scholar, Phillips Academy, Lake Forest College

Language Proficiency:

Bulgarian, English, German – fluent