

BRANDON FOX

New City, NY | Phone: (845) 825-7562

Email: brandonmfox@gmail.com | LinkedIn: www.linkedin.com/in/brandon-fox-25879515a | GitHub: <https://github.com/GitFox123>

OBJECTIVE

Aspiring to work in analysis, calculus, mathematical models (e.g. differential equations, continuous-time models, stochastic processes), and other areas of interest in mathematics. Aiming to use methods from those areas to research how they are applied to topics in financial derivatives such as option pricing and volatility and derivative sensitivity analysis and hedging. Eager to further develop expertise, acquire knowledge, and actively work and engage with students and faculty members.

EDUCATION

STATE UNIVERSITY OF NEW YORK AT NEW PALTZ

New Paltz, NY

Bachelor of Science in Mathematics

May 2022

- *Summa Cum Laude*; Dean's List
- Research: Image Processing with MATLAB and Partial Differential Equations (PDEs)
- Mathematics coursework: Mathematical Analysis, Differential Equations, Single and Multi-variable Calculus, Mathematical Modeling, Probability and Statistics, Number Theory, Abstract Algebra, Linear Algebra, Mathematical Logic, Geometry
- Computer Science coursework: Intro to Java Programming, Data Structures and Algorithms, Object-Oriented Programming (OOP), Web Page Design
- Activities and societies: Chabad, Choral Ensembles Concert, Anime Club, Integration Bee

PROJECTS | Available on personal website: <https://gitfox123.github.io/my-website-brandon-fox/>

PROJECTS IN IMAGE CLASSIFICATION WITH CONVOLUTIONAL NEURAL NETWORKS (CNNs)

Jul 2023

Brandon Fox

- Created Convolutional Neural Network (CNN) models and had them trained to autonomously classify images on training, validation, and testing MNIST data subsets
- Used ChatGPT prompts to learn and implement how CNN models and supervised learning work
- Completed projects under "Machine Learning with ChatGPT: Image Classification Model" from Coursera
- Tools and technologies used: Python, TensorFlow, Keras, NumPy, Matplotlib, scikit-learn, Seaborn, GitHub

IMAGE PROCESSING WITH MATLAB AND PARTIAL DIFFERENTIAL EQUATIONS (PDEs)

Oct 2021 – Dec 2021

Brandon Fox, Dr. Jeungeun Park

- De-noised corrupt images using MATLAB programming and Partial Differential Equations (PDEs) with mathematics professor

EXPERIENCE

TUTOR.COM

New City, NY

Online Tutor

2022 – 2023

- Tutored students in algebra, geometry, trigonometry, pre-calculus, and single and multi-variable calculus, in a fast-paced setting
- Helped each student understand and solve problems, step-by-step, through skillful questioning, visuals, and examples

VARSITY TUTORS, LLC

New City, NY

Online Tutor

2022

- Guided US and international students in algebra, geometry, trigonometry, pre-calculus, and single-variable calculus
- Created weekly, 1-on-1 session schedules for each student, based on factors such as, individual schedules and overall objectives

STATE UNIVERSITY OF NEW YORK AT NEW PALTZ

New Paltz, NY

Tutor

2021

- Tutored university students in mathematics courses including College Algebra, Pre-Calculus, and Introduction to Proof

TOOLS & TECHNOLOGIES

- MS Word/Excel/PowerPoint, Python, R, SQL, Java, MATLAB, HTML5, CSS/CSS3, JavaScript, GitHub

ADDITIONAL INFORMATION

- Leadership and volunteer: Welcoming Committee (2021), Campus Recruitment Event Worker (2019), Lending Hand (2019)
- Other skills and interests include: traveling, anime, puzzles, culinary arts, logo design, piano, backgammon, and video games