Michael Batavia

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EDUCATION

New York Tandon School of Engineering
Brooklyn, NY
B.S., Computer Science
GPA: 3.7, 2021 - 2025

Coursework/Interests
Computer Vision, ML, Convolutional Neural Networks/Deep Learning, Reinforcement Learning, Algorithms, Transportation, Logistics, Health

SKILLS

Programming Languages
Mastered: Python, C++, C, Java, Dart, MATLAB, Mathematica, HTML/CSS
Used: Kotlin, JavaScript, SQL, R

Python Libraries
numpy, pandas, matplotlib, Jupyter, TensorFlow, scikit-learn

Certificates
IBM, Data Analysis with Python on Cognitive Class
Google, Android App Development

PUBLICATIONS

HONORS

EXPERIENCE

Computer Vision Intern | Rizzo Lab, NYU Langone School of Health
2019 - 2023, NY, New York

- Computer vision research to support the development of a wearable device that assists users with peripheral vision disease
- Worked on adapting depth perception algorithms to help users navigate urban environments and utilize public transportation
- Developed 16 in-house presentations to update and inform members of latest trends in computer vision research
- Accomplished 95% confidence on object detection of construction equipment, cars and trucks using YOLOv8 and PyTorch.

Parallel Computing/ML Intern | Stony Brook University
Summer 2019 - 2020, Stony Brook University, Stony Brook, NY

- Under [Yuefan Deng](#), self-taught myself how to build a parallel distributed synchronous convolutional neural network to detect breast cancer from slides of metastatic lymph nodes.
- Achieved the best learning rate and regularization for the custom neural network using keras-tuner; prevented overtraining with early stopping and model checkpoints.
- Achieved over 80% test accuracy and ROC AUC score with synchronous SGD optimization and Nesterov acceleration.
- Determined the best magnification of lymph node slides for increased neural network accuracy using matplotlib and a t-test.

Lead Instructor | iD Tech Camps
Summer 2022, Nord Anglia International School, New York, NY

- Adapted and taught a custom curriculum at iD Tech Camps to teach middle and high school students introductory machine learning, deep learning, cryptography and cryptocurrency.
- Engaged students into building their own rock-paper-scissors AI in TensorFlow using TeachableMachine and Python 3.
- Guided students in building their own convolutional neural network for digit recognition using the MNIST dataset.
- Captivated students with fun demonstrations of rotation ciphers and showed them how to generate their own NFTs.

Batavia, M. (2021). [New Computational Model For Mitosis To Save Lives From Cancer](#). *Journal of Dawning Research*, 3, pg. 73-90.

2022, *Honors Program Scholar*, GLASS (Global Leaders and Scholars in STEM), NYU Tandon School of Engineering

2021, *Semifinalist*, Regeneron Science Talent Search

2021, *1st Place Winner*, Congressional App Challenge District NY-14
(App nominated by Congresswoman Alexandria Ocasio-Cortez)

PROJECTS

- Developed CrownCatch, an app that helps users avoid areas with high Covid-19 infection rates, social distance, and find current, accurate, health-related news.
- Completed exploratory data analysis and visualization on a dataset of avocado prices on Kaggle; used random forest regression, SVM regression and RNNs to predict price given prior time series data.
- Hosting a live podcast on WNYU (*The Upload*) focusing on highlighting entrepreneurial activity and projects within the NYU community and beyond.
- Developing an app that alerts NYC subway riders of alternate routes and real-time train information to their destinations when service is delayed or canceled.