

John C. Abrahams

Scarsdale, 10583 • (914) 246-7257 • johnnycabrahams@gmail.com • [Github URL](#)

EDUCATION

Lehigh University, Bethlehem, PA

Bachelor of Science in Computer Science

Minor: Probability and Statistics

Graduation: May 2025

GPA: 3.55

Honors: Dean's List: Spring 2022, Spring 2023

ACADEMIC PROJECTS

Machine Learning Analysis, Statistical Reasoning and Methods.

April 2023 – May 2023

- Engineered Machine Learning Analysis by implementing the Logistic Regression Algorithm to predict values in a cohort of 363 individuals with 33 features.
- Reduced two dimensions within the dataset by implementing Principal Component Analysis.

Data Structures Evaluation, Programming and Data Structures

October 2022 – November 2022

- Developed algorithm that can analyze 100,000+ line file of usernames and corresponding passwords for efficient analysis.
- Assessed the efficiency of various data structures such as binary trees and hash maps in handling large datasets.

App Development Project, Software Engineering

August 2023 – Present

- Developing social media application including a back-end Java server, a web/mobile front-end that accesses the server, and a command-line Java program for running administrative tasks.
- Collaborating with five peers rotating individual roles to keep up to date on the software development cycle from design to deployment.

RESEARCH

Research Assistant, Lehigh University Signal Processing and Communication Research Lab.

August 2023 – Present

- Investigate machine learning solutions for missing data in autonomous vehicle sensors.
- Refine data for victims of cyberattacks.

Hackathon, Lehigh University Department of Computer Science and Engineering

March 2023

- Developed and proposed solutions to aid natural disaster survivors through the implementation of a specialized website.
- Provided survivors with precise information regarding the availability and locations of essential supplies.

Technical Trading Strategy, personal practice

December 2021 – January 2022

- Reverse engineered technical trading strategy Swing Index System developed by Welles Wilder
- Back tested using back-testing platform to determine the effectiveness of the strategy in the current market.

PROFESSIONAL EXPERIENCE

New York Brain & Spine Surgery, Research Associate, White Plains, New York

May 2023 – August 2023

- Evaluated data imputation methods including the EM Algorithm and regression techniques for replacing missing data.
- Implemented logistic regression and support vector machines to determine their effectiveness in predicting patient outcomes after Anterior Cervical Discectomy & Fusion in a cohort of 100 patients.

Brain & Spine Surgeons of New York, Intern, White Plains, New York

May 2022 – August 2022

- Analyzed perceptron and logistic regression algorithms to determine their effectiveness in predicting patient outcomes.
- Advanced skills in data analyses and machine learning algorithms.

Hudson Health, Data Analyst, (White Plains, New York)

May 2021 – August 2021

- Managed data entry for outcome software development of a proprietary product developed by the company.

EXPERIENCE & ACTIVITIES

Global Expeditions Group (British Virgin Islands)

June 2019

- Collected environmental data of multiple species for local research organizations in the British Virgin Islands.
- Participated in environmental cleanups, organized charity events, and taught children at local schools.

SKILLS

Programming Languages: C (proficient), C++ (proficient), python (proficient), java (proficient), R (proficient), SQL (beginner)