

# Mathew Sabu

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## EDUCATION

### Adelphi University

BS/MS in Computer Science

Minor in Mathematics

Garden City, New York

Expected Graduation, May 2027

- **Concentrations:** Machine Learning/Artificial Intelligence
- **GPA:** 3.66/4.00 (Dean's List)
- **Related Coursework:** Linear Algebra, Statistics and Data Analytics, Algorithms and Complexity, Data Structures, Object-Oriented Programming, Calculus II, Database Management Systems, Discrete Structures.

## TECHNICAL SKILLS

**Programming:** Python, Java, Git, SQL, R, HTML/CSS, JavaScript, C++, Docker.

**Frameworks/Libraries:** Spring Boot, ReactJS, Pandas, NumPy, Matplotlib, Scikit-learn, Tensorflow, PyTorch.

**Tools:** Jupyter Notebooks, VSCode, Postman, PyCharm, Eclipse, GitHub.

**Certifications:** Machine Learning Specialization Certificate, Coursera (Stanford University) - [Certificate](#)

## EXPERIENCE

### Headstarter AI

SWE Fellow

Remote

July 2024 – Present

- Building **5 AI** apps and API's using NextJS, OpenAI, Pinecone, and StripeAPI.
- Developing projects from design to deployment leading **4+ engineering fellows** using MVC design patterns.
- Coached by Amazon, Bloomberg and Capital One engineers on Agile, CI/CD, Git and microservices patterns.

### NASA MITTIC

Finalist

Houston, Texas

Feb 2024 - May 2024

- Competed in the NASA MITTIC challenge against over **50+ universities** nationwide, successfully winning Phase 1.
- Leveraged NASA's solar-powered CO2 converter to develop a device aimed at reducing emissions from vehicle exhaust by **50%** in the transportation industry.
- Collaborated with a team of 5 to present our proposed solution to NASA experts at the Johnson Space Center, demonstrating its potential impact and securing **3rd** place.

### Programming Tutor

Tutor

Adelphi University

Sept 2023 – Present

- Assisted over **50+ students** in understanding fundamental programming principles, algorithms, and data structures.
- Debugged code, troubleshooting errors, and optimizing program performance.
- Conducted one-on-one tutoring sessions for students in various programming languages and concepts.

## PROJECTS

### Facemask Detection - [GitHub](#)

Python/Tensorflow/Scikit-learn/Matplotlib/Numpy

New York, New York

May 2024 - June 2024

- Utilized Tensorflow to make a convolutional neural network (CNN) to build a face mask detection system that detects the presence or absence of a mask in a given image.
- Executed Scikit-learn to train, test, and split the data, resulting in an impressive accuracy score of **95.9%**.
- Apply Numpy to prepare the data for analysis, ensuring peak performance of the model.

### Breast Cancer Classification - [GitHub](#)

Tensorflow/Pandas/Scikit-learn/Matplotlib/Numpy

New York, New York

April 2024 - May 2024

- Utilized both Tensorflow and Keras to design and implement a neural network for classifying data as benign or malignant.
- Proficiently applied Scikit-learn to standardize and split the data, ensuring optimal performance of the model.
- Successfully trained, tested, and validated a predictive model with a remarkable **95%** accuracy in distinguishing between benign and malignant data.

### Email Spam Prediction - [GitHub](#)

Python/Scikit-learn/Pandas/Numpy

New York, New York

Jan 2024 - Feb 2024

- Developed and implemented a Machine Learning solution using Logistic regression, to develop an email spam prediction system that determines if a given email is spam or not.
- Applied Scikit-learn to train and test the given data, ultimately predicting spam emails with a **96.6%** accuracy.
- Leveraged Python and Machine Learning libraries to pre-process the data, validating the ideal performance of the model.