

## Anthony J. Barrera

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GitHub: [AnthonyBarrera116 - https://github.com/AnthonyBarrera116](https://github.com/AnthonyBarrera116)

Website: <https://anthonybarrera116.github.io/Ajbarr.github.io/>

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## EDUCATION

### Loyola University Maryland

*Bachelor of Science in Computer Science*

*Minor in Statistics*

Baltimore, MD

September 2019 - May 2023

September 2019 - May 2023

### New Jersey Institute of Technology

*Master of Science in Computer Science*

Newark, NJ

September 2023 – December 2024

## COMPUTER SKILLS

*Languages* (Intermediate-Advanced knowledge): Python, Java, JavaScript, C, C++

*Related Tech*: HTML, React Native, React.js, Pytorch, TensorFlow, Torch, Keras, Gym, Gymnasium, Sklearn, Oracle, Mongo DB, Solidity, Hardhat

*Software*: Skilled in Adobe photoshop, Adobe Premiere Pro, MobaXterm, Clion, IntelliJ IDEA, JetBrains PyCharm, jGRASP, Visual Studio Code, Android Studio, Oracle, XAMPP, SQL Developer, Arduino IDE

*Operating Systems*: Windows 10, Mac OS

## COMPLETED COURSEWORK

Software Engineering/ Microprocessor-Based Systems/ Machine Learning/ Quantum Computing/ Cryptocurrencies and Blockchain/Computer Science Project / Discovering Information in data/ Operating Systems Design/ Data Management Systems Design/ Internet and Higher layer Protocols/ Artificial Intelligence/ Reinforcement Learning / Machine Learning/ Data Mining/ Deep Learning/ Natural Language Processing

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## PROFESSIONAL EXPERIENCE

### USA Hockey

*Hockey Referee*

Various Rinks in NJ

July 2016 – September 2022

- 6 years' experience obtaining Level 3 certification (ages 5 to 18)
- Communicate professionally with players, coaches, and parents
- Ensuring all USA Hockey rules are implemented

### Loyola University Maryland

*Information Technology Support Specialist*

Baltimore, MD

September 2019 – May 2023

- Analyze, troubleshoot, and evaluate technology issues for 5,000 students and 3,500 staff
- Provide support and assistance to keep campus technology optimized and running efficiently
- Streamline repair processes and update procedures for hardware and software
- Configured hardware, devices, and software to set up workstations for students and faculty

### New Jersey Institute of Technology

*User Services Support Specialist*

Newark, NJ

October 2023 – December 2023

- Analyze, troubleshoot, and evaluate technology issues for students and faculty on Campus
- Provide support and assistance to keep campus technology optimized and running efficiently
- Configured hardware, devices, and software to set up workstations for students and faculty

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## PROJECTS

### Software Engineering Project - <https://github.com/AnthonyBarrera116/SEP-GROUP>

*Mobile App – Recreational Football*

Loyola University Maryland

September 2022 – December 2022

- Mobile App for recreational football
- *Make Teams, Coaches, Players, Games*
- Tech stack: MongoDB, React Native, JavaScript

### Senior Project - <https://github.com/AnthonyBarrera116/Senior-Project>

*FI320 Calculator Website*

Loyola University Maryland

January 2023 – May 2023

- *Calculator for Finance (Time Value of Money, Bonds, Stocks, Capital Budgeting)*
- *User, History, Calculations*
- Tech stack: MongoDB, HTML, JavaScript

**Crypto Token Project -** <https://github.com/AnthonyBarrera116/Coin>  
Making *ERC-20 Token* and *Faucet* - <https://anthonybarrera116.github.io/Coin/>

Loyola University Maryland  
January 2023 – May 2023

- Website – Faucet to drip a ERC-20 token
- Deploying contract on Sepolia Testnet
- Tech stack: Node.js, React.js, Solidity, Hardhat, JavaScript

**Zoo Database Project -** <https://github.com/AnthonyBarrera116/DATA-Manager>

Making of a *zoo* database of SQL, Front-End, Back-End and HTML Pages

New Jersey Institute of Technology  
September 2023 – December 2023

- Website for signing into database
- Several functions like adding new employee, animal and more
- Tech stack: HTML, Python, XAMPP

**AI-Stock Project -** <https://github.com/AnthonyBarrera116/AI-Stock>

Making of Model to predict future stock

New Jersey Institute of Technology  
January 2024 – May 2024

- Two Scaler programs Standard and Min Max
- Four different Ideas of predicting future stock
  - Open Close
  - Open Close Sklearn
  - Open Up Down Close
  - Open High Low Close

**CNN Animal Classification -**

<https://github.com/AnthonyBarrera116/Image-animal-classification>

New Jersey Institute of Technology  
May 2024 – August 2024

*CNN Model* making and testing between Own s a MobileNet

- CNN Model made from tensorflow GPU
- CNN model using MobileNet
- Animal Classification with Probability

**Apriori Algorithm, Brute Force, Association Rules -**

<https://github.com/AnthonyBarrera116/Apriori-Alg>

New Jersey Institute of Technology  
May 2024 – August 2024

Making of *Association Rules* using support and confidence of Apriori transactions

- Confidence Calculating
- Support Calculating
- Association Rules of Transactions

**K means and Hierarchical Clustering -**

<https://github.com/AnthonyBarrera116/kmeans-Hierac-clustering/tree/main>

New Jersey Institute of Technology  
May 2024 – August 2024

*K means clustering and Hierarchical* from scratch and calculates silhouette

- K means clustering from scratch
- Hierarchical clustering from scratch
- Calculates silhouette and shows which is better

**Image classification using CNN model from Scratch -**

<https://github.com/AnthonyBarrera116/Image-animal-classification>

New Jersey Institute of Technology  
September 2024 – December 2024

Making of CNN Model from scratch to classify animal images

- Making of CNN from scratch using Pytorch
- Uses animal images of 90 different animals

**NLP Study –** <https://github.com/AnthonyBarrera116/NLP-BERT-Study>

Study of BERT, Logistic Regression, SVC and etc using Sklearn and building of BERT ,Logistic and SVC from scratch

New Jersey Institute of Technology  
September 2024 – December 2024

Learning to build BERT, Logistic Regression, and SVC from scratch for Text Classification

- Using Sklearn of BERT, Logistics Regression, SVC and other models
- Study to make a better BERT from scratch versus sklearn library

**Hockey Prediction of Games-** <https://github.com/AnthonyBarrera116/Hockey-Predictions>

Web scraping data from Hockey Reference and training AI Model

Personal Time  
December 2024 – Ongoing

Using Beautiful Soup Libraries to Web Scrape Public knowledge of Hockey Reference

- Using Pytorch and nn layers to train model
- Organizing data from html file to make data frames