

## Anthony J. Barrera

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

Age: 24



## Education

### Loyola University of Maryland

B.S Computer Science

Minor: Statistic

Baltimore, MD

September 2019 - May 2023

September 2019 - May 2023

New Jersey Institute of Technology

M.S Computer Science

Newark, NJ

September 2023 – December 2024

## Professional Experience

### USA Hockey

*Hockey Referee*

- 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

Various Rinks in NJ

July 2016 – September 2022

### Loyola University Maryland

*Information Technology Support Specialist*

- 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.

Baltimore, MD

September 2019 – May 2023

### New Jersey Institute of Technology

*User Services Support Specialist*

- 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

Newark, NJ

October 2023 – December 2023

## Skills

- **Programming Languages (Advanced):** C, C++, JavaScript, Python
- **Programming Languages (Intermediate):** SQL, Java
- **Programming Languages (Basic):** Ruby, Solidity
- **Related Technology:**
  - **App:** React Native
  - **Website:** HTML, React.js
  - **Web 3:** Solidity, Hardhat, React.js
  - **Database:** Oracle, Mongo DB
  - **AI:** Pytorch, TensorFlow, Torch, Keras, Gym, Gymnasium, Sklearn

**Software Engineering Project -**

<https://github.com/AnthonyBarrera116/SEP-GROUP>

Mobile App – Recreational Football

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

Loyola University Maryland  
September 2023 – December 2023

**Senior Project**

FI320 Calculator Website - <https://github.com/AnthonyBarrera116/Senior-Project>

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

Loyola University Maryland  
January 2023 – May 2023

**Crypto Token Project -** <https://github.com/AnthonyBarrera116/Coin>

Making ERC-20 Token and Faucet - <https://anthonybarrera116.github.io/Coin/>

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

Loyola University Maryland  
January 2023 – May 2023

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

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

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

New Jersey Institute of Technology  
September 2023 – December 2023

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

Making of Model to predict future stock

- 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

New Jersey Institute of Technology  
January 2024 – May 2024

**CNN Animal Classification -**

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

CNN Model making and testing between Own s a MobileNet

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

New Jersey Institute of Technology  
May 2024 – August 2024

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

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

Making of Association Rules using support and confidence of Apriori transactions

- Confidence Calculating
- Support Calculating
- Association Rules of Transactions

New Jersey Institute of Technology  
May 2024 – August 2024

**K means and Hierarchical Clustering -**

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

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

New Jersey Institute of Technology  
May 2024 – August 2024

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

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

Making of CNN Model from scratch to classify animal images

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

New Jersey Institute of Technology  
September 2024 – December 2024

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**NLP BERT 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

- *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*

New Jersey Institute of Technology  
September 2024 – December 2024

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

Web scraping data from Hockey Reference and training AI Model

- *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*

Personal Time  
December 2024 – Ongoing

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## Courses

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|--|------------------------------------|
| • <i>CS 496: Senior Project</i>                      |                                    |
| • <i>CS 482: Software Engineering</i>                | Loyola University Maryland         |
| • <i>CS 484: Machine Learning</i>                    | Loyola University Maryland         |
| • <i>CS 489.01: Intro to Quantum Computing</i>       | Loyola University Maryland         |
| • <i>CS 489.02: Cryptos and Blockchain</i>           | Loyola University Maryland         |
| • <i>CS 403: Discovering Info in Data</i>            | Loyola University Maryland         |
| • <i>CS 479: Intro Microprocess-Based Systems</i>    | Loyola University Maryland         |
| • <i>CS 630: Operating Systems Design</i>            | Loyola University Maryland         |
| • <i>CS 656: Internet and Higher Layer Protocols</i> | New Jersey Institute of Technology |
| • <i>CS 631: Data Management Systems Design</i>      | New Jersey Institute of Technology |
| • <i>DS 669: Reinforcement Learning</i>              | New Jersey Institute of Technology |
| • <i>CS 670: Artificial Intelligence</i>             | New Jersey Institute of Technology |
| • <i>CS 610: Data Structures and Algorithms</i>      | New Jersey Institute of Technology |
| • <i>DS 634: Data Mining</i>                         | New Jersey Institute of Technology |
| • <i>DS 675: Machine Learning</i>                    | New Jersey Institute of Technology |
| • <i>DS 677: Deep Learning</i>                       | New Jersey Institute of Technology |
| • <i>DS 680: Natural Learning Processing</i>         | New Jersey Institute of Technology |