

# ADITYA BHATI

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## EDUCATION

The Ohio State University - Main Campus

*Expected December 2026*

**Undergraduate in Computer Science & Engineering**

**GPA: 3.34/4.00**

## RELEVANT COURSEWORK

Data Structures & Algorithms | DbC Programming in Java | Computer Architecture | Operating Systems | Discrete Structures | Statistics & Probability | OOP in C++ | Database Systems | Computer Networking | Principles of Programming Languages | ML

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## PROJECTS & EXPERIENCES

**Self-Made Motorized Robot | C++**

*January 2024 - April 2024*

- ❖ Designed and developed a host of parameter-based functions, some incorporating formulas based on fundamental principles of kinematics and rotational physics.
- ❖ Built, wired, and programmed apparatuses and light sensors by leveraging time-based and motion-based functions from libraries curated by OSU to allow the robot to traverse and complete tasks in a course.
- ❖ In each run, the robot was graded on a scale of 100 points, in which the robot scored 92 points on its most significant run.

**Artist Search Website | Python, HTML, CSS, JS, Flask**

*November 2024 - January 2025*

- ❖ Leveraged the specific endpoints from Spotify's Web API to perform data fetches (via Python) that acquire an artist's follower count, genres, top songs, and discography.
- ❖ Utilized Flask to write the front-end code needed to present the data obtained by executing the back-end code above onto a web page in an aesthetic layout.

**QuantiFiAI - SIAM2I 2025 Quantathon | Python, PyTorch, Sci-Kit Learn, Pandas**

*March 2025*

- ❖ Developed a quantitative trading system that employed numerous advanced PyTorch deep learning models, Random Forest classifiers, anomaly detection, and statistical analysis for market regime prediction and to identify an investment strategy that could beat buy-and-hold S&P 500 from 2019-2022 given market data from the past two decades.
- ❖ Designed adaptive allocation strategies coupled with tactical risk management for the trading system, which allowed it to secure 2nd place at SIAM2I's 2025 Quantathon at OSU.

**FitLog | TS, HTML, CSS, Firebase**

*June 2025 - Present*

- ❖ Designing and developing a CRUD application in which users can publish/react to (like and comment on) posts containing an image of an outfit and a description of each piece. Users also have access to a personalized "Style Board" page where future outfits can be planned.
- ❖ The application is React-based and leverages Firebase for real-time data, user-auth, and cloud functions for scalable operations.

**Damage Detector | Python, PyTorch, NumPy, YOLOv8, Docker, CVAT**

*December 2025 - Present*

- ❖ Developing an object detection model via PyTorch, YOLOv8, and NumPy with 2,600+ images (sourced from Kaggle) split into imagesets of cars with/without damage to detect cosmetic damage on cars.
- ❖ Currently manually annotating (by running CVAT locally) and classifying the imageset of damaged cars into 6 distinct types of damage. Each imageset will be split 70%/20%/10% for training, validation, and testing.

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## TECHNICAL SKILLS

- ❖ **Languages:** C/C++ | Java | JavaScript | TypeScript | Python | HTML/CSS | SQL
- ❖ **Frameworks & Tools:** React | Tailwind | Web APIs | PyTorch | Firebase | AWS | YOLOv8 | CVAT | Docker | Git