

ANURAG AMCHI

+919864650345 | [portfolio-website](#) | anuragamchi@gmail.com | [linkedin.com/in/anuragamchi](https://www.linkedin.com/in/anuragamchi) | github.com/anurag-amchi

EDUCATION

Indian Institute of Technology Ropar

2022 - 2026

Bachelor of Technology in **Mathematics and Computing**

Rupnagar, Punjab

Key Courses: Data Structures and Algorithms, Data Science and Machine Learning, Analysis and Design of Algorithm, Theory of Computation, Discrete Math, Linear Algebra, Computational Algebra, Digital Logic and Design, Calculus.

EXPERIENCE

Borde Inc. USA

September 2023 - March 2024

Machine Learning Intern

Certificate | Remote

- Used tech stack and tools: Python, Bash, Azure, Git, Dagster.
- Wrote new bash scripts and optimised the old ones to automate annotations and segmentation to improve the accuracy of the assigned classes by **2-5%** and **overall accuracy** by **0.71%**.
- Trained efficient models using **Yolo-v5** on datasets containing more than **150k images** of almonds.

PROJECTS

Finance Tracker

June 2024 - July 2024

MongoDB, Express, React, Node.js, JWT Authentication

GitHub

- Made a full stack project to keep detailed track of finances with **email reminders** and **visual analytics**.
- Implemented **JWT authentication** for secure user access and data protection.
- Enabled expense tracking, budgeting, and interactive data visualization features.

Collision Detection using Quadtree

May 2024 - June 2024

HTML, CSS, JavaScript

Live Link | **GitHub**

- Made a fully functional visual website about the Quadtree data structure with features like construction, insertion, searching, deletion, query searching and collision detection for better analysis.
- Optimized collision detection using the Quadtree data structure, resulting in faster object interaction within a 2D environment by reducing the **time complexity** from traditional $O(n^2)$ to $O(n \log(n))$.
- Increased the performance frame rate from **5 fps** to **40 fps** during collision of **10k points**.

Movie Recommender

May 2024

Python, Machine Learning

GitHub

- Built a recommender system to recommend 5 movies when a user inputs a movie or rates several movies.
- Combined collaborative filtering and content based algorithm on a dataset containing over **10k movies** rated by over **1k users** with total **100k ratings**.
- Implemented algorithms to detect and account for biased ratings and insufficient data to minimize their effect and boosted the model **accuracy** by **4%**.

TECHNICAL SKILLS

Languages: C/C++, Python, JavaScript, MATLAB, HTML, CSS

Frameworks/Libraries: React, Express.js, Node.js, Jupyter, TensorFlow, Pandas, Numpy, Matplotlib.

Database/OS/Tools: MongoDB, Git, Linux.

POSITION OF RESPONSIBILITY

Guitar Coordinator, Music Club, IIT Ropar

June 2023 - June 2024

Event Management, Zeitgeist, Techno-Cultural Fest

March 2023

MISCELLANEOUS

Rank 542, ICPC Prelims

2023

Codeforces, Max Rating: 1407(Specialist)

2023

CodeChef, Max Rating: 1684(3 star rating)

2023

Inter IIT Cult-Meet 6.0, Secured 6th position in Pair-on-stage competition among 23 IITs.

2023

NTSE Scholar, Granted scholarship to top 2000 students of stage 2 by NCERT every year till their study period.

2020

Anandoram Baruah Award, Awarded by Secondary Education Board of Assam to top meritorious students.

2020