

# DHRUV JAIN

[dhruvaugust1@gmail.com](mailto:dhruvaugust1@gmail.com) | +91 8422811006 | [LinkedIn](#) | [GitHub](#)

## PROFILE

Dedicated and motivated second-year student with a strong passion for learning new technologies and continuously improving problem-solving skills. Committed to investing time and effort to gain proficiency in technical concepts and adapt quickly to new challenges.

## SKILLS

- Python
- Java
- Javascript
- Data Structures/Algorithms
- SQL
- React
- C/C++
- Artificial Intelligence

## PROJECTS

### Warshall's Algorithm visualization using AWT in Java

- Designed and developed a visual representation to show the working of Warshall's Algorithm
- Using Java's Abstract Window Toolkit (AWT), we can visualize this algorithm by representing the graph as a matrix and dynamically updating connections as the algorithm progresses.
- The visualization helps in understanding how intermediate nodes influence path connectivity, making it easier to grasp the concept of graph reachability.

### Quasi-Newton method of optimization in Python

- Developed a program which uses the Quasi-Newton method to optimize a function given by the user
- It approximates the Hessian matrix using gradient information, making it more efficient than Newton's method for large-scale problems.
- In Python, libraries like SciPy provide implementations such as the BFGS algorithm, which is widely used in machine learning and numerical optimization.

### Cost-Effective and High-Quality Material Selection Using Geometric Mean Optimizer (GMO) in Python

- Developed a program which optimized the selection of construction materials using Geometric Mean Optimizer
- This project uses NumPy, Pandas, and SciPy to optimize the selection of construction materials. The goal is to minimize material costs while ensuring high quality, durability, and sustainability.
- The algorithm evaluates multiple material combinations using fuzzy membership functions, leveraging NumPy for matrix operations, Pandas for data handling, and SciPy for optimization tasks.

## EDUCATION

### BACHELOR OF ENGINEERING

Thadomal Shahani Engineering College, Major in Artificial Intelligence & Data Science

**CGPA:9.17**

2023-2027

### HIGHER SECONDARY CERTIFICATION

PACE Junior Science College, Dadar

Maharashtra State Board Of Secondary and Higher Education, Pune

**78.67%**

2021-2023

## CERTIFICATIONS

- Python And Artificial Intelligence – Microsoft Learn Student Ambassador
- Artificial Intelligence Bootcamp – Google Dev Student Clubs

## SOCIAL

- Technical Executive for IETE-TSEC for the year 2024-25
- Build With India – Cleared Mentoring Round - 1