



Dhruv Jaiswal

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DOB: January 05, 2005

Address: H No 303 Daisy, Silver Dale Society, Ghorpudi, Pune



Education

Indraprastha Institute of Information Technology Delhi

B.Tech CSE

2023 – Present

CGPA: 9.26

(till 3rd Semester)

Sanskriti School Chanakyapuri, New Delhi

CBSE 12th Board

2020 – 2022

Percentage:

91.4%

Sanskriti School Chanakyapuri, New Delhi

CBSE 10th Board

2017 – 2020

Percentage:

92.0%

Skills

Expertise Area Operating Systems, Algorithm Design, Runtime Interference Mitigation (Caladan and ghOSt framework), ML/DL, Data Structures

Programming Language Python, C/C++, Java

Tools and Technologies Git/Github, Manim, Maven, Gradle, JUnit, Godot, KSCHED, Caladan TensorFlow, Pytorch, Numpy, Pandas, Matplotlib, libGDX, Box2D, Google Collab, scikit-learn, POSIX threads, SARIMAX

Technical Electives Operating Systems, Statistical Machine Learning, Advanced Programming, Database Management Systems, Analysis and Design of Algorithms, Computer Organization, Theory of Computation

Internship

Runtime Interference Mitigation (Research and Development) (Dec 24 – Present)

Guide: [Dr. Vivek Kumar](#)

Creating Energy efficient runtime systems which prevent interference by upto **1100%** such as hyperthreading and LLC cache. Currently under [High Performance Computing Lab](#).

Open Source Development (Industrial)

(Dec, 24 – Present)

Guide: Leo Torres, [Grant Sanderson](#)

Team Size - 400+

Contributed in maintaining and fixing issues in the [open source math library animation](#) engine for explanatory math videos. With over **200+** lines of code written.

Mutual Funds Investment Optimization (Research)

(Sep, 24 – Present)

Guide: [Vaibhav Gupta](#) (IQC rank 1)

Team Size - 3

Developed a forecasting model for mutual fund data using SARIMAX, optimizing under high frequency. Achieving **75%** forecasting accuracy, improving predictions of mutual funds NAV.

Projects

Simulating cryptographic attacks on RSA [Python]

(Aug, 24 – Nov, 24)

Guide: Maria Eichlseder's lectures

Demonstrating the [Wiener's Attack on RSA](#) with a small private exponent, using the concept of **continued fractions**. Also **proving the correctness** of the attack mathematically.

Operating System Shell Functionality Modules [C/C++]

(Aug, 24 – Dec, 24)

Created multiple modules for functions of the shell of Linux systems like [Schedulers using Round Robin policy](#), [Page allocator](#) and a [Simple Multithreader](#)

Angry Birds game [Java, Gradle]

(Aug, 24 – Dec, 24)

Guide: [Dr. Arun Buduru](#) (Course Instructor)

Team Size - 2

Created a [recreation of the popular mobile game](#) Angry Birds using **Gradle** framework and **Box2D** physics. Finished with testing using **JUnit** and **serialization** of save states.

Interpreter for C-like language [Python]

(Dec, 24 – Jan, 25)

[An interpreter](#) that implements a limited C-like language using **BNF concrete syntax**.

Using **Pratt-Parsing** to evaluate expressions using Top Down Operator Precedence.

Movie Recommendation system with Linear Algebra [Python]

(Mar, 24 – Apr, 24)

[Developed an algorithm](#) which takes data of reviews of users and suggests movies on the basis of the movies you like. The algorithm is true to the **Page-Rank Algorithm** of Google.

Studied ML under AWS Machine Learning Scholarship [Python]

(Apr, 21 – Oct, 21)

Trained and studied multiple Machine Learning models in [AWS Machine Learning Foundations](#) course in the AWS Machine Learning Scholarship.

Positions of Responsibility

- Member of Student Council
- Clubs Coordinator

(Aug, 23 – Aug, 24)

(Sep, 23 – Aug, 24)

Awards and Achievements

- **Distinguished Dean's List** for Academic Performance member in college
- Codeforces - **Specialist** - peak **rating 1432**
- Ranked **5th** out of batch of 613 in college
- Runner up of Shri Niamat Rai Contest of **Investigatory Projects in Mathematics**
- JEE advanced rank - **8110**

Interests and Hobbies

- Math Research/Readings
- Chess
- Tennis

Declaration: The above information is correct to the best of my knowledge.

Dhruv Jaiswal

Date: January 17, 2025