[redacted]

EDUCATION

Program	Institution	%/CGPA	Year
BTech in Engineering Physics	IIT Madras, Chennai	7.19	2020-24
Class X (Maharashtra State Board)	[redacted]	97.20	2018
Class XII (HSC board)		83.38	2020

ACHIEVEMENTS

- **JEE MAINS:** Achieved remarkable **99.628 percentile** overall, with **99.87 percentile in Mathematics.**
- Solved **500+ questions of Data Structures and algorithms** on **Leetcode, GFG and Codeforces**.
- Cleared **Software Competency Test (SWC-Advanced) by Samsung R&D for working professionals**.
- Achieved **Gold Level** in **WorldQuant Brain Global Quant Challenge** showcasing quantitative skills.
- SOF National Science Olympiad **(NSO)**: Achieved an **international rank of 447** and **Zonal rank of 155**.
- Rationalist Talent Search Exam (RTSE): Accomplished a remarkable **Maharashtra State rank of 10th.**

PROFESSIONAL EXPERIENCE

Samsung R&D Bangalore
Developer Internship
(May-Jul'23)

- Enhanced overall accuracy by automating log extraction processes, streamlining code testing efficiency.
- Developed a scalable **automation script** for consistent processing of expanding logs and parameters.
- Enabled insightful **data analysis** through automated mathematical computations on logs in the database.
- Enhanced **network** understanding by acquiring knowledge **of LTE architecture and OSI model**.

Research Consultant at **WorldQuant**
(Jul'23-present)

- Developed innovative **mathematical models** known as **alphas** contributing to improve trading strategies.
- Leveraged advanced quantitative techniques to design and implement alphas, identifying market patterns.
- Applied data analysis to create alphas, unveiling **market patterns** and optimizing trading approaches.

PROJECTS & CERTIFICATIONS

Goldman Sachs
Software Engineering Experience Program

- Promoted **secure passphrases** aligned with the industry best practices, enhancing overall protection.
- Adopted sophisticated advanced **hashing algorithms** and integrated **salting for password security**.
- Strategically promoted **password security** through user education and secure passphrase advocacy.

Algorithmic File Compressor
GithubLink

- Developed efficient C++ text compression algorithm using **Heaps, Binary Trees, HashMap, Priority Queue** etc. data structures, with Huffman coding and **achieved overall 20%-90% of compression**.
- Implemented **seamless decoding techniques for the retrieval** of original text file, ensuring the data integrity. This was achieved by Optimized **space utilization** by using fewer bits for frequent characters.

Motion Detector (Course project)
GithubLink

- Created a **motion detector** with **Wolfram Mathematica**, **detecting intensity** changes with a webcam.
- Implemented a sound alert mechanism that triggers when the user moves away from the webcam's fov.
- Generated a visually informative graph that visually represents and **highlights mobility patterns**.

Virtual ATM Machine
GithubLink

- Developed a virtual ATM machine program using **Object Oriented Programming principles** in **java**.
- Implemented user account creation with username and password, login, and signup **functionalities.**
- Enabled users to execute various transactions like balance inquiries, cash withdrawals, and deposits.

Tic-Tac-Toe game
GithubLink

- Created a captivating Tic-Tac-Toe game, delivering an immersive **interactive platform** for two players.
- Built using the **C++ programming language** and leveraging the principles of an **Object-Oriented Programming (OOPs),** complemented by a strategic implementation of Data Structures like **HashMap**.

RELEVANT COURSEWORK

• Data Structures and Algorithms	• Operating Systems	• Programming in Modern C++
• Introduction to Machine Learning	• Foundation of Computational Physics	• competitive programming
• Analog Systems and Lab	• Digital signal processing	• Signals and Systems
• Probability Foundations	• Numerical Tech for Engineers	• Principles of Economics

SKILLS

• Programming Languages: C++, Python, Java, HTML, CSS	• DBMS, SQL, MySQL, MATLAB, Jupyter Notebook
• Problem Solving, LTspice, AutoCAD, Wolfram Mathematica	• OOPs, Git, GitHub, VScode, MS-Word, Excel,IntelliJIdea

EXTRA CURRICULAR

- Actively Participated in the **G20 1st Education Working Group Meeting** hosted at IITM Research Park, enriching insights.
- **Saathi mentor (Position of Responsibility):** Mentored students in their first year throughout academic and co-curricular spheres.
- Effectively taught Physics to 11th and 12th class students in rural areas as a part of **NSS Edlearn program (EdJustice foundation)**
- Contributed by creating Mathematics Content for underprivileged students with **Ignite community project (NGO Bhumi).**