

Dhruva Sambrani

Educational Qualifications

BS-MS | 2018-2023 | IISER M

CPI: 9.39

SPI (Sem 1): 9.8

SPI (Sem 2): 9.8

SPI (Sem 3): 8.8

SPI (Sem 4): 9.4

12th Grade | 2018 | Primus

Physics: 99

Math: 94

Chemistry: 95

10th Grade | 2016 | Prakriya

Science: 94

Math: 95

Programming - Reinventing The World

IISER-M App | Android | Firebase

I started making the [Unofficial IISER-M app](#) for Android in the Summer of 2019. With 200+ downloads, it remains in constant development with new features being added every 6 Months

IISER-M PC | HTML-CSS-JS | electron

A [PC version](#) of the Unofficial IISER App is in the making, to facilitate easy usage of institute resources

QuantumComputing.jl | Julia

An attempt to simulate a Quantum Computer and making a [Julia module](#) for the same. [The associated paper](#) also acts as the documentation

Simulation and Modelling | Python | Coursera

Completed the course [Simulation and modeling of natural processes](#) offered by Geneva University. Received [Certificate](#) with a grade of 95.31%

Discrete Math for CS (Specialization) | Python | Coursera

Completed the Specialization [Introduction to Discrete Mathematics for Computer Science](#) offered by National Research University Higher School of Economics & University of California San Diego. See [Certification](#)

Courses Completed:

Mathematical Thinking in Computer Science

Introduction to Graph Theory

Combinatorics and Probability

Delivery Problem

Number Theory and Cryptography

Minivet Birding App | Android | SQL

I [contributed](#) in making the [Minivet Birding App](#) under [Dr. Manjari Jain's](#) Behavior and Ecology Lab, IISER-M. Minivet is an app developed to assist both budding and experienced birders.

ArcheoSiteNamer | Python | SQL

[ArcheoSiteNamer](#) is a novel method of naming Archeological Sites. Without a standard naming convention, archeological site names often collide with each other. Hence, with [Parth Chauhan's Lab](#), I created a DBMS to facilitate easy adoption of the proposed convention.

ASN-GUI | electron | SQL

[ArcheoSiteNamer GUI](#) is a GUI application which uses the ASN Python backend to make and maintain databases of sites.

Functional Programming | Scala | Coursera

Completed the course [Functional Programming Principles in Scala](#) offered by Geneva University. Received [Certificate](#) with a grade of 96.00%

Github Profile | Multiple Languages

Do visit my GitHub profile to see my other projects in a multitude of languages and fields! Link at the bottom of the page

Research Experience - Discovering the World

Relativistic Black Body Radiation | JS Bagla | Winter 2018

As part of my First Year Winter Project, I took up the project [Black body radiation in special relativistic frames](#) under JS Bagla, IISER Mohali, where I looked at how Black Body Radiation transforms in a frame that is moving uniformly with respect to the source. We see that the radiation is no more uniform, leading to a force on the particle. The [quantitative analysis](#) of this force is done using numerical methods in Julia.

Introduction to Quantum Mechanics and Computing | Arvind | Summer 2019

My First Year Summer Project was an introductory reading to the Mathematical Structures that underlie Quantum Mechanics and then take it forward to a theoretical introduction to Quantum Information and Quantum Computing. I also attempt to simulate a Quantum Computer on a Classical computer and making a [Julia module](#) for the same. [This paper](#) serves as a very brief introduction to Quantum Computing and documentation of the code in the form while publishing.

Academic Acheivements

KVPY | 600 | 1118 | 24

Qualified KVPY SA, SX, SB with a rank of 600, 1118 and 24 respectively and hold a KVPY Fellowship

Vijyoshi Camp | 2017

Attended the Vijyoshi camp in December 2017 against KVPY SA

Mimamsa Center toppers | IISER Pune | 2019

My team was the centre topper in Mimamsa 2019, a Science quiz conducted by IISER-P.

Extra-Curricular Activities

Teaching Underprivileged Children | 2016

As a way to give back to the community, I taught underprivileged children English and Mathematics for two weeks in my school in 2016. The group involved two children, both of whom had learning disorders.

Photography

I also occasionally dabble in photography, though I don't consider myself to be very good at it . Visit my [Photography Page](#) for a peek at some of my photos!

Convener, Turing Club | IISER-M | 2019-20

Convener of the Turing Club of IISER Mohali in the academic year of 2019-20.

Coding and Programming

I am an avid programmer and know multiple languages. Visit the [Programming Section](#) of this website