Hiten Dalmia

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EDUCATION

Nov. 2022 – Present B. Sc. (Hons.) Mathematics KIRORI MAL COLLEGE, UNIVERSITY OF DELHI, DELHI Majoring in mathematics with a minor's degree in economics. Current GPA (in %): 82.5

Jul. 2020 – Jul. 2022 Higher Secondary Certificate P. OBUL REDDY PUBLIC SCHOOL, HYDERABAD Studied the subjects Physics, Mathematics, Chemistry, Computer Science and English.

Research Projects

2025

p-adic numbers, Supervisor: Mr. B. Sèmthanga

- Learned about the p-adic numbers and their constructions using the p-adic norm.
- Wrote a report on the p-adic numbers and defined some basic algebra of the p-adic numbers.

2024

Tracing Closed Curves with Epicycles, Supervisor: Prof. S. K. Kaushik

- In this paper me and my co-authors introduce the fundamental concepts of Fourier series and transforms (continuous and discrete), delving into their mathematical formulations, properties and applications.
- We also include a python program that performs the discrete Fourier transform to animate tracing of curves.

2023

Big-O Notation, Supervisor: Prof. S. K. Kaushik

- Learned about the Big O notation, its origins, conceptualizations, and its uses, particularly in studying growth of sequences and in computer science.
- Wrote a subsequent report on the aforementioned topics.

Corporate Experience

Mar. 2023 - Present Independent & Fractal

FREELANCE FULL STACK DEVELOPER

- Working as a freelance full stack web developer, on Upwork and elsewhere.
- Working as a founding member in the software development and graphic designing freelance organisation, Fractal.

Oct. 2023 - Apr. 2025 Tagglabs Experimental Pvt. Ltd., Gurgaon SOFTWARE DEVELOPER (PART-TIME)

- Started as an intern, hired as a part-time worker post completion of internship.
- Developed a package to implement feature matching with SIFT on Flutter to place persistent markers in real space, employed native C APIs and Open CV libraries.

Independent Projects

2025

Drawing My College's Logo on the Complex Plane

- Implemented the Discrete Fourier Transform algorithm in Python to approximate the fourier series for SVG Paths using the DFT.
- Used Matplotlib to draw the logo onto the complex plane.

2024

Data Analysis and Visualisation with Pandas, Course Project

- Worked on a US Housing dataset with the python libraries Seaborn, Pandas and Numpy.
- Drew statistical inferences using Violin Plot, Scatter Plot, KDE Plot etc.
- Found correlations between various characterisites of the US Housing market using basic statistical descriptions.

Intersectional Analysis of Bama's Sangati, Course Project 2023

An intersectional analysis of a portion of the canonical text in Indian Feminist Literature, Sangati by Bama.

Behavioural and Statistical Experiment

RANDOMNESS CHALLENGE

- Test the ability of users to be random by asking them to click 6 identical buttons in a random fashion.
- Uses different statistical methods to analyse the data collected, uses a REST API to store data in an Object Relational Database.
- Made using ExpressJS, ReactJS, Heroku and MongoDB.

MERN Stack E-commerce Website

CZ CREATION ONLINE SHOP

- A fully fledged e-commerce website for a small business taking their products online.
- It has user authentication using JWT tokens, CRUD operations like the ability to add items to cart, place orders, forgot password etc. implemented using a REST API.
- Made using MERN stack, hosted on Heroku.

Medicine Tracker Android App

Medcheck

- An app made using React Native that tracks your medicines for you and warn you whenever a particular medicine is running low.
- Made using Expo, React Native, SQLite3.

Automatic Attendance System using Python and Tesseract-OCR Breeze

- Enables a teacher conducting a class to take attendance effortlessly in Google Meet using the chat.
- Made using Python and Tesseract-OCR.

Selected Coursework

Real Analysis Complex Analysis Multivariate Calculus Abstract Algebra Numerical Analysis Linear Programming Linear Algebra Probability and Statistics Financial Mathematics Differential Equations Metric Spaces

Extracurricular Activities

The Debating Society, Kirori Mal College Feb. 2023 - Present

Member

Feb. 2023 - Jul. 2023 Tensors, The Mathematics Society, Kirori Mal College Nov. 2022 - Nov. 2024 Parivartan, The Gender Forum, Kirori Mal College

CONTENT CO-HEAD Join Secretary

Feb. 2023 - Nov. 2023 IMPACT Project, a non-profit consulting group

Member

Jul. 2018 - Mar. 2020 Energy Conservation Club, D.A.V. Public School

Organiser

Led the state government initiated Energy Conservation Club in Grade 10 to recognition and merit by the Telangana state government.

Honors

Data Storycraft, Symbiosis Center for Information Technology, Pune 1st Position 3RD Position Math Me If You Can (Mathematics Quiz), St. Stephen's College ALAGS E-MUN (5th Edition), International Press HIGH COMMENDATION ISA Chemistry Scientific Concept Demonstration 1st Position

SKILLS

- Languages: Hindi, English, Telugu
- Programming Languages: Python, Javascript, C++, R, Mathematica, SQL,
- Tools: Vim, LATEX, Linux, Bash, NodeJS, Flutter, ReactJS, React Native, TallyPrime ERP, Adobe Photoshop

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2021

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2021

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2020 2019

2023