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

2024 **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 characterisitcs of the US Housing market using basic statistical descriptions.

2023	**Intersectional Analysis of Bama's Sangati**, Course Project

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

2021	**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.

2021	**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.

2021	**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.

2020	**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
Metric Spaces	Differential Equations	

EXTRACURRICULAR ACTIVITIES

Feb. 2023 - Present	**The Debating Society**, Kirori Mal College	MEMBER
Feb. 2023 - Jul. 2023	**Tensors, The Mathematics Society**, Kirori Mal College	CONTENT CO-HEAD
Nov. 2022 - Nov. 2024	**Parivartan, The Gender Forum**, Kirori Mal College	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

2025	**Data Storycraft**, Symbiosis Center for Information Technology, Pune	1ST POSITION
2023	**Math Me If You Can (Mathematics Quiz)**, St. Stephen's College	3RD POSITION
2020	**ALAGS E-MUN (5th Edition)**, International Press	HIGH COMMENDATION
2019	**ISA Chemistry Scientific Concept Demonstration**	1ST POSITION

SKILLS

- **Languages:** Hindi, English, Telugu

- **Programming Languages:** Python, Javascript, C++, R, Mathematica, SQL, Dart

- **Tools:** Vim, LaTeX, Linux, Bash, NodeJS, Flutter, ReactJS, React Native, TallyPrime ERP, Adobe Photoshop