

EDUCATION

National Institute of Technology Nagpur
B. Tech in Chemical Engineering

2019 – 2023

PROFESSIONAL EXPERIENCE

University Of Wisconsin - Madison

Madison, USA

Research Assistant

May 2022 – Oct 2023

- Project under **Prof. Ivo Hermans** used **ML** for screening of chemical compounds resulting into **70 percent** reduction in processing time.
- Developed a dataset with over **50 features** of catalysts from over **200 research papers**, cleaned and filtered raw data using SQL

ZS Associates

Pune, India

Research Assistant

Oct 2021 – April 2022

- Worked with **Data Engineering** team to improve performance of **AWS** frameworks by reducing processing time by **60 percent**.
- Built **Data Quality Management** services and did POC for minimising the cost of cloud resources used in the frameworks.

ISB

Hyderabad, India

Research Assistant

May 2021 – Aug 2021

- Worked with **Prof. Sumeet Kumar** on the project “YouTube Parental Control”, developed a kids friendly **Android app**.
- Developed a YT video transcript database to segregate educationally rich content based on **sentiment analysis**.

IIM Udaipur

Udaipur, India

Research Assistant

May 2021 – Aug 2021

- Worked under **Prof. Ashish Galande** on project “Effect of social distancing promotion campaigns on brand value”.
- Used POS tagging, Regex, BeautifulSoup, and other **NLP techniques** for **sentiment analysis** of twitter data to understand the brand.

Projects

StorySphere: A Cutting-Edge Blogging Experience

[Github Link](#)

- Developed dynamic, type-safe user interfaces with **React, Zod, and TypeScript**, enhancing frontend reliability and user experience.
- Engineered a scalable serverless backend using **Cloudflare Workers** and **TypeScript**, ensuring efficient and low-latency performance.
- Managed database operations and performance with **Prisma ORM** and **PostgreSQL**, ensuring robust data handling and scalability.

WallStreetBets Stocks Recommender

[Github Link](#)

- Developed a **machine learning** model to classify posts, achieving **65% accuracy** in identifying valuable stock research content.
- Used Pushshift & iexfinance **APIs** for comprehensive **data extraction** & preprocessing, enhancing data quality for accurate model training.
- Implemented Naive Bayes, k-means++ clustering aalgos with dimensionality reduction techniques. **Reduced time** for stocks analysis.

Sustainable Carpooling Web App

[Github Link](#)

- Developed using **JavaScript, Next.js, React.js, & Google Maps** to encourage ride-sharing reduce & carbon emissions.
- Potentially addressing the challenge of over **250 million vehicles** causing road congestion and environmental harm.
- Implemented features like **real-time feedback** to incentivize users in reducing their carbon footprint.

SpendWise: Student Expense Tracker

[Github Link](#)

- Created with **Node.js and MongoDB** web app for students to track expenses and manage savings goals.
- Resolved complex bugs, improving HTML template rendering and maintaining event listeners for a seamless user experience.
- Ensured **real-time data updates** across pages by optimizing global state management and server communication.

Achievements

- Achieved a rank of **2022 out of 150,000 candidates**, with a **score of 613** in **GATE CSE 2024**.
- Funding for Summer Research Internship: Awarded **\$15,000** from the **University of Wisconsin-Madison** (2022).
- Wipro’s Machine Learning Challenge: **Ranked 92 out of 2000 participants** (2022)
- Research Poster Contest: **Secured 1st position** at NIT Nagpur Chemical Engineering Department (2022)
- Geeks for Geeks VNIT Coding Contest: **Ranked 10** out of 500 participants (2021)

Programming Technologies & Skills

- **Languages:** Python, C/C++, R, Java, Kotlin, SQL, HTML, CSS, JavaScript, Typescript
- **Tools & Platforms:** Tableau, GitHub, Git, Google Cloud Platform, Android Studio, AWS, MongoDB
- **Frameworks & Libraries:** PyTorch, SciPy, RDKit, Spark, recat.js, node.js, Express.js, Django, Next.js
- **Domains:** Machine Learning, Deep Learning, Data Analytics, Android Development