Divyansh Natani
Chemical Engineering
Indian Institute of Technology, Bombay

190020043
B.Tech.
Gender: Male
DOB: 21-10-2001

Examination	University	Institute	Year	CPI / %
Graduation	IIT Bombay	IIT Bombay	2023	null

Pursuing a **Minor degree** in Department of **Computer Science and Engineering**

Scholastic Achievements

- Currently holding **Department Rank 2** among **137** undergraduates students of Chemical Engineering Dept *('21)*
- Achieved **Academic Proficiency** (AP Grade) for exceptional performance in **Introduction to Numerical Analysis** (1 out of 170) and **Computational Method Lab** (4 out of 158) *('20)*

Positions of Responsibility

Core Group Member | Web & Tech Head | 51st Mood Indigo *(Apr'21-Present)*

Asia's largest college cultural festival | Net Worth: xx million | Footfall: 146,000+ | Events: 240+ | Colleges: 2000+

- Spearheading a 2-tier team of **150+** volunteers to enhance the visitor experience through technical innovations
- Piloting the digitization of fest to generate high-value data and enhance operations using **QMS** & **RFID** technology
- Prototyping a series of **10+ interactive** tech installations enhancing real-time visitor engagement & experience

Key Initiatives:

- Introduced a **pre-fest MI App**, a one-stop solution for all Mood Indigo activities to boost user outreach by **20%**
- Increased workshops & competitions registrations of Indoor Indigo by **120%** through innovative portal design
- Developing an Online Food Coupons system to streamline management & distribution saving **800+ man-hours**

Convener | Web and Coding Club | Institute Technical Council *(May'20-Mar'21)*

Part of 10 member team organising 20+ activities in institute to promote coding culture

- Designed a Java based **HTML-Script-Generator** for weekly-newsletter reducing the creation time **by 70%**
- Revamped club's social media publicity plans with **200% y-o-y increase** in audience participation & engagement
- Mentored **300+ students** in a 8-week course to build a personal website and a Food Delivery App on Django

Technical Activities & Projects

Cooling System in high processing CPUs | Course Project | Guide: Prof P. Sunthar *(Jan'21-Apr'21)*

- Analyzed **liquid** and **air-based** cooling system in high end CPUs and played role of **Generator** in a team of 8
- Used heat and mass transfer equations to **compare cooling efficiency** and overall cost analysis of both system
- Modified mass-flow-rate of liquid cooling system & proposed **hybrid cooling system** with **20% higher efficiency**

S.A.S.H.A - Smart Artificial System with Home Automation | ITSP *(Mar'20-Jun'20)*

- Created a **multi-feature**, security-enabled telegram **Chatbot** capable of controlling electric appliances along with general conversation using Natural Language Processing and jokes, news & weather reports using **external APIs**
- Developed a user-interactive website for setting up house-appliances, live-tracking, assist user with basic commands
- Reduced upto **20% energy consumption** by introducing **Green House Mode** and **Night Mode** features

Phase Diagrams and Allotropic Transformations | Course Project | Guide: Prof J. Adhikari *(Jan'21-Mar'21)*

- Analyzed Phase Transitions, Solubility, Gibbs Energy of metals in 2-phase system & summarized results in a report
- Determined physical properties & structure of **5+ Iron Allotropes** from Temperature-Composition phase diagram

Client-Server Based Interoperable GIS System | Course Project | Guide: Prof S. Durbha *(Jan'21-May'21)*

- Developed an **AJAX-Driven** interoperable web application using JavaScript and services available on Geoserver
- Processed OGC standardized **SOAP** & **REST**-based geospatial web services like WMS, WFS, WCS & SOS

Numerical Methods to Solve Differential Equations | Course Project | Guide: Prof S. Mehra *(Nov'20-Dec'20))*

- Solved second-order non-linear **Van-der-Pol equation** using 4th order Adam-Bashforth & Adam-Moulton method
- Found **stability conditions** on step-size vs damping and validated using **ode23** and **ode23s** solvers in MATLAB

Extracurricular Activities

Language	• Studied **French** for **6 years** up to intermediate level and secured 10 Grade in CBSE X board
Cultural	• Represented hostel 9 in a team of 5 & secured **4th position** in the inter-hostel radio play GC • Completed a year long **NSO Keyboard** course and studied **intermediate-level** music theory
Technical	• C,C++,Java,Python, MATLAB, HTML, CSS, JavaScript, Django, Angular, Flutter, SolidWorks
Others	• Ranked **3rd** among 500+ students in **Essay Writing** organised by Airport Authority of India • Stood **Runner Up** among 50+ participants in City-Round of **Cryptic Crossword Contest**

Scholastic achievements and extracurricular activities are not verified by the Placement Cell