



Kunal Gupta
Chemical Engineering
Indian Institute of Technology, Bombay

08002022
B.Tech.
Male
DOB: 16 January 1989

| Examination | University | Institute | Year | CPI / % |
|---|------------|------------|------|-----------|
| Graduation | IIT Bombay | IIT Bombay | 2012 | 7.37 |
| Minor Degree - Energy Sciences and Engineering Department | | | | [Ongoing] |

PROFILE: Industrial and research exposure in **Energy** sector, **Oil & Gas** sector; focusing on **process design**, **bottle necking** and **cost estimation**. Interest in **travelling**, **mountaineering** and **photography**

TECHNICAL RECOGNITIONS

- **Pre Placement Offer** by Reliance Industries Ltd. for exemplary work at Internship [2011]
- Co-authored Book '**Green Institute**' in a team of 12 students for Industrial Design Centre, IIT Bombay [2011]
- Recognized with prestigious **Research Fellowship**, awarded by Indian Academy of Science, Bengaluru [2009]

INDUSTRIAL AND RESEARCH EXPERIENCES

RELIANCE INDUSTRIES LIMITED, Reliance Technology Group, Navi-Mumbai [May'11-Jul'11]
Optimal Design of CO₂ Transport System for Enhance Oil Recovery [EOR] & Algae Oil Refinery

- Conceptualized CO₂ transport model for EOR and Algae Oil Refinery; **200km pipeline** from Jamnagar to Kutch
- Devised **flexible transport model**; caters wide domain ranging from **38Kg/hr to 10148.32Kg/hr** of flue gases
- Reduced **operational** cost from USD 10 to USD 6 per ton CO₂ & **capital** cost from USD 4 billion to USD 3 billion

JAWAHARLAL NEHRU CENTRE OF ADVANCED SCIENCE & RESEARCH (JNCASR), Bengaluru [May'10-Jul'10]
Physical Diagnostics & Mathematical Modelling of Coanda Effect

- Integrated **hydrodynamic model** from Navier Stokes equation and checked **sensitivity** of different parameters
- Designed and **Fabricated** an experimental setup that physically diagnosed the phenomenon and acquired data
- Regressed the generated data and proposed an **empirical correlation** to quantify Coanda Effect

ESSAR OIL LIMITED, Jamnagar Refinery, Gujarat [Dec'10]
Process Operations in Naptha-Hydrotreater & Continous Catalytic Reformer [NHT-CCR]

- Technically interpreted and **evaluated** the **process flow sheets** and piping & instrumentation diagrams
- Identified the **bottle necks**; performed hydraulic, material and energy balance calculations for the operation

SEMINAR AND PRESENTATION

BIODESIL SYNTHESIS AND COST ESTIMATION [Jul'11-Dec'11]

- Manufactured biodiesel at lab scale from the given waste oil feed stock and performed **quality control test**
- Performed **scale-up process calculations** and estimated the **cost for large scale** batch process

ENERGY AUDIT OF HOSTELS IN IIT BOMBAY CAMPUS, [Jan'10-Apr'10]

- Formulated an **algorithm** for Energy Audit and **benchmarked** the current energy systems in IIT Bombay
- Proposed Solar and Biogas plants; **reduced** energy consumption by **84.9%** and **pay back period** of 3.6 years

MARKET STRUCTURE ANALYSIS OF BEVERAGE INDUSTRY [Jul'08-Dec'08]

- Critically reviewed **marketing** and **business strategies** of the Top 10 International beverage firms
- Analysed market shares and revenue trends of last 2 decades and commented on the **market forms**

POSITIONS OF RESPONSIBILITY

DEPARTMENT PLACEMENT CO-ORDINATOR [Jul'11-Till Date]

- Worked in a team of **80 students** with **diverse work profile** for placement of **1500 students**
- Revitalized a **pitching strategy** for desired companies and compiled the preference tally of the students

HOSTEL MAINTENANCE SECRETARY [Jul'09-Dec'10]

- Introduced an **Online Complaining Portal** that systematized the complain lodging for **400 hostel** inmates
- Received "**Organizational Hostel Color**" among **22 secretaries** for dedicated and sincere services to hostel

EXTRA CURRICULAR AWARDS

- Awarded with a distinguished title "**The Gem of PAF - 2010**" amongst 400 students for Fine Arts [2011]
- Conferred **PAF Special Mention** twice for outstanding performance in fine arts in hostel [2008, 09]
- Awarded the '**A**' **Certificate** for serving National Cadet Corp (NCC) and 10 days Camping expedition [2007]
- Competed with 400 people in a **15km marathon** "I-Race" held at IIT Bombay [2010]
- Won **3 gold** medals and **2 silver** medals in intra athletics during schools and college

SOFTWARE: MATLAB, MS Excel-Macros, ASPEN-Plus, HTRI, Ansys-Fluent & Gambit, Laser Doppler Velocimetry (LDV)