



UDIT RANJAN
Chemical Engineering
Indian Institute of Technology, Bombay

07D02014
Dual Degree (B.Tech+M.Tech.)
Male
DOB: 28th June, 1988

Examination	University	Institute	Year	CPI / %
Graduation	IIT Bombay	IIT Bombay	2012	7.58
Intermediate/+2	CBSE	DAV Public School, Dhanbad	2006	93.80
Matriculation	CBSE	DAV Public School, Dhanbad	2004	90.60

INDUSTRIAL EXPERIENCE

Uhde India, ThyssenKrupp AG

[May'10-Jun'10]

Engineering Project-Nagarjuna Oil Corporation Limited (NOCL), Cuddalore Refinery

- Member of task force rendering engineering services to NOCL for construction of **6 MMTPA refinery**
- Executed detailed engineering activities to be **implemented** as a part of project worth **INR 300 million**
- Developed **piping layout** and calculated **pump hydraulics** for the Product and Intermediate Tank Farm
- Designed **heat exchangers** on HTRI Xchanger Suite under operational constraints and standards
- Reviewed and updated **Piping & Instrument Diagrams** and sized tank breather valves and vents
- Awarded **letter of appreciation** for excellent work and contributions towards the project

Oil and Natural Gas Corporation Limited, Ahmedabad

[May'09]

Field Operations-Kalol and Nawagam

- Studied mechanisms in **upstream petroleum industry** and operations in crude oil processing plants
- Evaluated the treatment process of crude oil from production wells before it is sent to refineries
- Optimised and reduced the dose of **Pour Point Depressors** by **10%** after studying flow parameters of crude oil from different fields; suggested the need to optimise **Demulsifier** dose

Central Institute of Mining & Fuel Research, Dhanbad

[Jun'09-Jul'09]

Research project-Fischer Tropsch Process

- Comprehensively reviewed the gasification techniques for production of **synthesis gas from biomass**
- Assessed different **catalyst bases** and effect of sulphur addition on the liquefied hydrocarbon product
- Analyzed the effect of **promoters** on catalyst activity, and on **conversion and yield of synthesis gas**

ACADEMIC PROJECTS

Under Ground Coal Gasification (UCG) *Master's Thesis*

[May'11-till date]

- Working on an **ONGC sponsored** research project to determine the operational parameters required for field tests to use unmineable coal
- Simulated **2-D gasification** of coal particle using **COMSOL Multiphysics** to identify the reaction profiles
- Currently working on **3-D cavity growth modelling** in deep coal seams using **ANSYS Fluent**

Acetaldehyde Production *Plant Design Project*

[Jan'11-Apr'11]

- Developed and simulated a **30,000 MTPA** Acetaldehyde production plant on **Aspen Plus**
- Designed the operating equipments and parameters through detailed mass and energy balances
- Appraised the **economic viability** through financial analysis of capital, operating cost and revenue

The Petroleum Refining *Total Professeurs Associés*

[Mar'11]

- Studied the challenges and possible avenues of **sustainable development** across **refining industry**
- Examined technological transitions from **primary** to **modern refinery schemes** and operating units
- Awarded **excellent grade** and appreciated for the level of understanding of the refining sector

Supply Chain Network Optimization *Course Project*

[Oct'10-Nov'10]

- Modelled a **three echelon network** involving factories, warehouses and customer zones
- Optimised the flow of goods at minimal cost after predicting future demand using mixed integer algorithm and **Holt's forecasting method**

TECHNICAL SKILLS

Engineering Packages: COMSOL, ANSYS Fluent, Gambit, Aspen Plus, Matlab, HTRI Xchanger suite

Programming Languages: C, C++, JAVA

POSITIONS OF RESPONSIBILITY

Company Coordinator, Placement Cell, IIT Bombay

[Jun'11-till date]

- Part of a **32 member team** responsible for on campus recruitment of over **1400 students**
- Explored job space based on student preference and implemented **sector specific contacting strategies**
- Successfully improved corporate participation from FMCG, core consulting, and energy sectors
- Initiated discussions and negotiating with over **80 firms** to achieve a **20% YoY** rise in conversion ratio
- Actively involved in scheduling and organising recruitment and preparatory activities; acting as an interface between student, companies and authorities

Internship Coordinator, Practical Training Cell, IIT Bombay

[Aug'09-Apr'10]

- **Co-Founded** and laid down the framework for Practical Training Cell in a **22 member team**
- Streamlined Industrial and Research Internship process achieving more than **300 student internships**
- Drafted the **Practical Training Policy** to ensure student benefits and also maintain corporate relations
- Initiated contacts forming year long associations with over 150 core chemical firms and universities
- Facilitated **70% placement (50% YoY increase)** for the students of Chemical Engineering Department

Mess Secretary, Hostel-05

[Aug'08-Apr'09]

- Systematized the process of providing food items from KFC, Mother Dairy at **5% subsidized** rates
- Played a pivotal role in the **privatisation of hostel mess**; communicated with authorities, inspected different caterer services and constituted the **legal contract**

Coordinator, Techfest'09

[Oct'08-Jan'09]

- Led a team of 9 organisers to execute **FTEB - IC engine car racing** with a participation of over **110 teams**
- Handled logistics for the competition; devised rules; designed and administered the **track fabrication**

EXTRA-CURRICULAR ACTIVITIES

Cultural

Performing Arts Festival (PAF)

- **Production In-charge:** Led a team of 60 volunteers to create the set for play "Mai Mati" [2010]
- Awarded **PAF special mention** for valuable contributions towards production of play "Karwat" [2009]

Others

- **Vocalist** for the Indian band in Freshizza, IIT Bombay annual fresher's cultural festival [2007]
- Participated in fine arts events such as Poster making, Cartoon making competitions [2008-10]

Sports

- Member of the **silver medal winning** Hostel Cricket team in inter-hostel sports championship [2011]
- Represented hostel in Volleyball, Cross Country Races, Tug of War sports championships [2008-10]

Intellectual Property Rights *CIMFR, IPR Division, Dhanbad*

- Studied diverse aspects of IPR and necessity of protecting their infringement for an organization's economy by examining case studies [Dec'09]