



**Mohit Kumar Jain**  
**Chemical Engineering**  
**Indian Institute of Technology, Bombay**  
**Specialization: NONE**

**110020080**  
**UG Second Year**  
**Male**  
**DOB: 12.07.1993**

Examination	University	Institute	Year	CPI / %
Intermediate/+2	BIE, Andhra Pradesh	Sri Chaitanya	2010	96.90
Matriculation	SSC, Andhra Pradesh	St. John's	2008	92.70

## ACADEMIC ACHIEVEMENTS

- Pursuing a **minor in Renewable Energy Technologies**
- All India Rank **891** in **IITJEE** among 5 lac students [2011]
- All India Rank **1153** in **AIEEE** among 12 lac students [2011]
- Finalist of **14<sup>th</sup> National Children's Science Congress** under the focal theme Bio diversity: Nurture Nature for our Future held by A.P State Council of Science and Technology
- Scored an aggregate of **99.7%** (maths, physics and chemistry) in 12<sup>th</sup> Board Examinations
- Ranked **318** in **EAMCET** among 2 lac students [2011]
- Achieved a percentile of **97.4** in **11<sup>th</sup> National Science Olympiad** [2008]
- Recipient of **IIT Bombay's Merit-cum-Means Scholarship** [July'11-Present]

## POSITIONS OF RESPONSIBILITY

**MENTOR**, Student's Technical Activity Board, IIT Bombay [Jul'12-Present]

- Part of the 44 member team selected to mentor freshmen in technical activities
- Mentoring 60 students towards completion of their projects with wide scale application

**CO-ORDINATOR, Electronics Club of IIT Bombay** [May'12-Present]

- Conducted workshops, competitions, various talk sessions for freshmen of IIT Bombay
- Organised line following competition held at IIT Bombay in which 120 teams registered, covering about 3 sessions/workshops each of 6 hrs duration for this competition

**COORDINATOR, MOOD INDIGO**, (Asia's Largest Cultural Festival) [Mar'12-Present]

- Working with 10 member team, entrusted to raise sponsors for Food and Beverages section
- Leading a team of 14 organisers to maintain logistics for food court and refreshments for guests and artists

**CO-ORDINATOR, TECHFEST** (Asia's Largest Technical Festival) [Mar'12-Present]

- Working to make frameworks for open competitions to be held at Techfest 2013
- Leading a team of 12 organisers in structuring and implementation of competitions

## SKILLS

- Programming Languages : C++, Matlab, SCILAB, OpenCV(Library)
- Hardware Description Languages: Arduino(Electronics Prototyping language)
- GUI Tools : Microsoft office, Solidworks, Photoshop, After effects
- Operating system : Windows, Linux(Ubuntu distribution)

## INDUSTRIAL EXPERIENCE

**RASHTRIYA CHEMICAL AND FERTILISERS, MUMBAI** [Jan'12]

Guide – Prof. Sanjay Mahajani

- Successfully completed a training program on "Production of Sulphuric Acid" at RCF Mumbai
- Studied and observed the process incorporated for the manufacture of sulphuric acid and the various techniques used to optimise the energy requirements of the plant

## TECHNICAL ACTIVITIES

### BALL TRACKING ROBOT

[May'12-Jun'12]

*Institute Technical Summer Project, IIT Bombay*

- Implemented **image processing** in Open CV to detect and approach specific coloured balls
- Incorporated visual feed back from on board camera using enhancement and processing algorithms leading to better navigation
- Used **AVR microcontroller** and custom designed motor driver circuit for fine performance
- Designed the mechanical platform for testing various image processing algorithms
- Demonstrated at Institute's annual technical Exhibition

### AUTONOMOUS LINE FOLLOWING ROBOT

[Oct'11]

*Freshie General Championship, IIT Bombay*

- Build an **autonomous robot** which can follow a white line on a black background
- Robot used the *PID control mechanism for line following and differential drive mechanism*
- Secured **3<sup>rd</sup> Position** among 120 participating teams in the event

### ROBOTIC MANIPULATOR

- Played a pivotal role in designing a manual machine that perform a basic pick and place task
- Implemented a unique 4 bar gripping mechanism and actuation system
- Awarded with the **Best Manual Robot** and **Most Innovative Design**
- Secured **1<sup>st</sup>** position among the 44 participating teams

### WALL FOLLOWING ROBOT, *Self – project*

[Nov'11-Dec'11]

- Designed and fabricated an autonomous robot which follows wall and detects obstacle
- Designed the mechanical and electronic hardware along with controls of the robot
- Implemented IR sensors, distance sensors and motor drivers in the robot

### REMOTE CONTROLLED RACING CAR

[Aug'11-Sep'11]

- Designed a manually controlled wireless car that could traverse any given terrain

## KEY COURSES UNDERTAKEN

### CORE

- Chemical Engineering Thermodynamics
- Introduction to Transport Phenomenon
- Solid Mechanics

- Fundamental of Heat and Mass Transfer
- Process Fluid Mechanics
- Introduction to Numerical Analysis

### MATHEMATICS

- Complex Analysis
- Linear Algebra
- Differential Equations

### OTHERS

- Computer Programming and Utilisation
- Data Analysis and Interpretation
- Experimentation and Measurement lab

## EXTRA CURRICULAR ACTIVITIES

**District 1<sup>st</sup>** in Elocution on Road safety , received certification of appreciation from District Collector  
**National Service Scheme (NSS)** [2012]

- Volunteered for **ECF**(Environmental Conservation Forum) and Planted 4000 saplings with a team of 40 under **Green Campus** Initiative, IIT Bombay
- **Special Mention award** for altruistic efforts towards NSS

### Social Service

- Certificate of Appreciation from **ITRRODD** for raising fund for the welfare of **blind children**

### Guinness World Record

[Feb'12]

- Among the participants who made a **Guinness World record** of most people solving the Rubik's Cube at a time