



AKSHAY KHADAV  
Chemical Engineering  
Indian Institute of Technology Bombay  
Specialization: Chemical Engineering

150020052  
B.Tech.  
Male  
DOB: 18/01/1997

| Examination | University | Institute  | Year | CPI / % |
|-------------|------------|------------|------|---------|
| Graduation  | IIT Bombay | IIT Bombay | 2019 | 6.57    |

## PROFESSIONAL EXPERIENCE

**UPL LIMITED** | Insecticide Manufacturing Division, Ankleshwar May '18 - Jul '18

Received a **Letter of Recommendation** for work done towards increasing overall capacity of the chemical plant

- Designed shell and tube *heat exchanger* to reduce BCT by **14.3%** and achieved **16.7%** increase in capacity
- Validated stage-wise batch cycle times, identified *bottlenecks* using *Pareto charts* and *Best of Best* analysis
- Computed *mass and energy balances* for plant processes and conceived the difference in practice and theory
- Suggested trials on Crystallization and Particle size analysis to optimize filtration and drying characteristics

**OVERVIEW OF INDIAN CHEMICAL INDUSTRY** | Guide: Prof. Sanjay Mahajani, IIT Bombay Dec '17 - Feb '18

Visited **13** chemical and allied industries, encompassing bulk, fine and specialty chemicals around **25** plants

- Covered 5 manufacturing sectors- pharmacy, refinery, petrochemicals, agrochemicals, and power generation
- Simulated processing conditions and *energy integration* for LPG separation unit at GAIL on DWSIM
- Prepared a detailed report on manufacturing processes of Urea, Ammonia and ANP plants at GNFC complex
- Comprehended *product integration, waste management, quality control* and *post-patent research*

## PROJECTS

**PRODUCT DEVELOPMENT** | Guide: Prof. Sanjay Mahajani, IIT Bombay Jan '18 - Apr '18

Course Project, *Techno-Commercial Aspects of Fine Chemicals*

- Conducted a market research study of flavors, outlining major feedstock, growth rates, and future prospects
- Suggested a 1500 MTPA *Cinnamaldehyde plant*, based on atom economy, e-factor, IP, and process design
- Proposed a payback period of **7 years** with **PAT** of *INR 2.47 crores/annum* to justify the choice of product

**REVISITING AJANTA** | Guide: Prof. Sumant Rao, IDC, IIT Bombay Nov '16 - Jun '17

Received a **Letter of Recommendation** from the guide for diligent efforts during the course of the project

- Developed an Android app which facilitates *Virtual Reality* tour of Ajanta caves with *narrative* storytelling
- Programmed an *intuitive UI* and *gesture control* in collaboration with **10** technical experts and artists

## POSITIONS OF RESPONSIBILITY

**DESIGN AND CREATIVES HEAD** | Matsya, AUV IIT Bombay Sep '17 - Apr '18

Part of a 40-membered team | Budget worth: INR 1.5 million | Semi-finalists in Robosub '18

- Designed *UI/UX* for website and enforced social media publicity campaign for **85% y-o-y** growth in outreach
- Laid the foundation of public relations team and planned *vehicle unveiling* event featured in **The Hindu**

**COORDINATOR, CORPORATE RELATIONS** | Entrepreneurship Cell IIT Bombay Jul '16 - Jan '17

E-summit, Asia's largest non-profit, student-organized entrepreneurship conclave with a footfall of **20,000+**

- Spearheaded* a group of **15+** organizers to a successful organization of **20** institute level events, workshops and panels that aim at manifesting the latent entrepreneurial spirit in young students
- Executed Asia's largest B-plan contest *Eureka* with the team by setting a panel of **250+** judges and **80+** mentors

## ACHIEVEMENTS AND EXTRA-CURRICULARS

|           |                                                                                                           |     |
|-----------|-----------------------------------------------------------------------------------------------------------|-----|
| ACADEMIC  | Completed <i>Analytics</i> and <i>Machine Learning</i> courses conducted by Career Cell, IIT Bombay       | '17 |
|           | <b>2<sup>nd</sup> runners-up</b> for wit and <i>strategy-based</i> contest organized by ShARE, IIT Bombay | '17 |
|           | Certified for distinctive performance in 11 <sup>th</sup> National Cyber Olympiad, SOF                    | '11 |
|           | Awarded with a <i>certificate of merit</i> by CBSE for scoring a perfect <b>10.00 CPI</b> in class X      | '12 |
| OTHERS    | Completed <b>80</b> hours of voluntary teaching to 40+ underprivileged children under NSS                 | '15 |
|           | Headed a 3 membered team for <i>designing geometry and aerodynamics</i> of RC airplane                    | '15 |
| TECHNICAL | MATLAB, Mathematica, Minitab, C#, AutoCAD, Six Sigma, Adobe Photoshop, and Illustrator                    |     |