Palli Rohith

9701606287| rohithpalli515@gmail.com
LinkedIn - Rohithpalli| Portfolio

Education

2021 - 2025	BTech Chemical engineering at NIT SURAT	(CGPA: 8.66)
2021	Class 12 Board of Secondary Education Andhra Pradesh	(percentage:94.7)
2019	Class 10 CBSE	(percentage:89.6)

Work Experience

SUN PHARMACEUTICAL INDUSTRIES LTD | VADODARA
Jan 2025 – Present

Research Intern – Modeling & Simulation of Wurster Coater

- Developed a **Computational Fluid Dynamics (CFD) and Discrete Element Method (DEM) model** to optimize **Wurster coating efficiency**.
- Simulated and analyzed **critical process parameters** (fluidization velocity, atomization air pressure, inlet temperature, nozzle spray rate) to **enhance coating uniformity** and **reduce agglomeration & static charge buildup**.
- Designed a **predictive model** to minimize the need for multiple experimental trials in the lab, improving efficiency.
- Collaborated with **cross-functional teams** to refine modeling techniques and validate results.

GET 2024 SUMMER INTERN RELIANCE INDUSTRIES LTD | NAVI MUMBAI
May 2024 - July 2024

Summer Intern – PET Recycling & Process Optimization

- Analyzed and optimized the **bottle-to-bottle PET recycling process**, focusing on sustainability and efficiency.
- Identified **challenges across unit operations** and evaluated their impact on process performance.
- Researched and compared **top 5 global PET recycling machinery manufacturers** (USA, China, Germany, and Europe) based on operational efficiency, installation requirements, and output quality.
- Selected the best manufacturer that met **Reliance's project requirements** for setting up a **bottle-to-bottle PET recycling plant**.
- Developed a **comprehensive process understanding**, emphasizing **decontamination, IV retention, and high-quality PET resin production**.

Projects

PRODUCTION OF BENZENE FROM TOLUENE USING HDA PROCESS

Designed and optimized the benzene production process using the HDA method. Performed material and energy balance calculations across reactors, separators, and distillation columns to enhance efficiency. Designed critical equipment, including a distillation column, ensuring optimal performance and verifying against flooding and weeping conditions. Conducted thermodynamic and kinetic analyses to maximize benzene yield and reduce by-products. Estimated capital and operating costs, ensuring economic viability. This project developed skills in process optimization, equipment design, and cost analysis.

Key skills used: Material balance, Energy balance, Process design, Process Equipment design, Cost estimation.

Skills

Technical Skills : Fluid flow operations, Heat exchanger design and integration, Rigorous Distillation column design, Process design, Process equipment, Computational fluid dynamics(CFD) , Discreate element method (DEM).

Interpersonal Skills ; Process design, Process equipment, Computational fluid dynamics, Discreate element method, Teamwork, Active Listening, Decision-Making.

Analytical skills : MS Excel, SQL, Python-Pandas, NumPy, Tableau.

Academic Achievements

- Achieved the remarkable feat of ranking in the 95.38th percentile among one million peers in the JEE Mains and 18k rank in the JEE Advanced.
- Participated and won many Techno- Managerial events in our college

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