# Palli Rohith

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

## Summary

Chemical Engineering graduate from NIT Surat with strong skills in modeling, simulation, and process optimization. Experienced in applying engineering principles to solve real-world industrial challenges. Proficient in Python, MATLAB, Excel, and data analysis tools. Quick learner with strong problem-solving, collaboration, and time-management abilities.

## Education

| | | |
|---|---|---|
| 2021 - 2025 | BTech Chemical engineering at NIT SURAT | (CGPA: 8.74) |
| 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 and Sparger design for DCM removal***

- Developed CFD-DEM and first-principles models to optimize Wurster coating by mitigating agglomeration, static buildup, and coating variability.
- Created predictive tools using Excel, MATLAB, and Python to estimate coating efficiency and batch endpoints, reducing trial experiments in lab.
- Designed a scalable nitrogen sparger system for DCM removal using mass transfer models, optimized bubble size, and sparger geometry.
- Performed scale-up calculations for homogenizers and spargers; collaborated with R&D teams and vendors for model validation and pilot-to-plant transfer.

### 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

### PROCESS AND EQUIPMENT DESIGN FOR BENZENE PRODUCTION 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, Process scale-up, Computational fluid dynamics (CFD), Discreate element method (DEM).
***Interpersonal Skills;*** Multi-Tasking, Adaptability, Self – motivated, Decision-Making, Team player, Time management