

AOVI DESHPANDE

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EDUCATION

Shivajirao S. Jondhale College of Engineering

2017-2021

- B.Tech, Department of Chemical Engineering, *CGPA: 9.20/10*

Pandit Bachraj Vyas Vidyalaya

2015-2017

- Higher Secondary, Maharashtra State Board, *Score: 76/100*

Chanda Devi Saraf High School

2004-2015

- Secondary School, Indian Certificate of Secondary Education, *Score: 92/100*

SKILLS

Technical

Lean six-sigma Yellow Belt (Ongoing), Basic Aspen Plus, DWSIM, AutoCAD, Scilib, Python, MS-Excel

Soft

Leadership, Communication, Decision Making, Time Management, Negotiation

INTERNSHIP EXPERIENCE

Adya Group

Summer 2020

Position: Summer Intern

[Adya, Mumbai](#)

- Learned comprehensively about DWSIM and performed simulations of unit operations
- Generated a report on software uses and limitations along with one practical project

Rashtriya Chemical & Fertilizers Ltd

Winter 2019

Position: Vocational Trainee at Ammonia Plant

[RCF, Thal](#)

- Studied the process of production of Ammonia by Haber's Process
- Got familiarized with Digital Control Systems and their effects on pneumatic valves
- Overview of urea, argon, heavy water, carbonmonoxide, steam generation plants

Vijay Gas Industries

Winter 2019

Position: Management Trainee

[VGI, Ambarnath](#)

- Worked as an intern in Ammonia and Nitric Acid manufacturing plant
- Performed detailed analysis on Ammonia and Nitric Acid manufacturing and various unit operations in the process
- Generated a comprehensive report on the working of the plant

KEY TECHNICAL PROJECTS

Manufacturing of Sodium metabisulphite

Autumn 2020 - Present

Process Engineering

[Mumbai](#)

- Comparing various Industrial methods for production of sodium metabisulphite ($Na_2S_2O_5$) which is used as an antioxidant, preservative, leather, corrosion-inhibiter, reducing agent, coagulant, etc.
- Studying and simulating an end-to-end production of the best process (based on thermodynamic feasibility, equilibrium conditions, better crystal growth) on Aspen Plus
- Checking for the best yield of crystals by trying out various schemes along with modelling and generating PFD, P&ID and analyzing the cost and comparing it with the traditional method employed

Case study on In situ Product Recovery

Autumn 2020 - Present

Downstream Processing

[Mumbai](#)

- Studied product poisoning and removal techniques in case of biocatalyst for ABE fermentation and lactic acid production processes
- Understood various unit operations employed for ISPR like Vacuum Fermentation, Perstraction, Countercurrent Chromatography, etc.
- Reviewed some generalizations to be adopted as ISPR methods, based on product properties

Process Simulation for Azeotropic Systems

Process Engineering, Cost Analysis

Summer 2020

[Mumbai](#)

- Created an end-to-end process simulation of a three component azeotropic system
- The process consisted of nitric acid, HCl and water system which was separated by a dual pressure swing distillation column
- Analyzed the cost along with optimizing process for the system

Data Analysis

Predictive Modelling

Summer 2020

[Mumbai](#)

- Learned about predictive modelling and basics of machine learning
- Applied predictive modelling and statistical methods to analyse data of an insurance company and determining the probability of failure of payment based on past records

Cost-Effective Heat Exchanger

Process Equipment Design

Autumn 2019

[Mumbai](#)

- Developed a working model of variable temperature outlet shell and tube heat exchanger from scratch
- The model was awarded 1st prize in TSEC under IICHE (Indian Institute of Chemical Engineers)
- Implemented features for temperature adjustability and simple scalability

Steam Trap Health Monitoring.

Process Equipment Design

Summer 2019

[Mumbai](#)

- Developed a Steam Trap Health Monitor device which works on Piezoelectric effect
- Led the team of six throughout the whole development operation
- The project reached the semi finals in Smart India Hackathon 2019 (Hardware Edition)

POSITION OF RESPONSIBILITY

- Ambassador Relation Officer for Student Outreach Program at ChemTech Foundation (Sept 2020 - Present)
- Student Mentor appointed by the University to guide 8 students in their college life (Sept 2019 - Present)
- Magazine Editor for College Chemical Department Magazine (May 2020 - Aug 2020)
- Department Co Technical Head (Sept 2019 - Jan 2020)

ACHIEVEMENTS

- Qualified for Eyantra 2018 stage 2 held by CSE department of IITB among 200 participating colleges (2019)
- Ranked 1st in stage 1 of Chemophilia organized by Azeotropy, IIT Bombay (2019)
- Presented a poster on treatment of "Recycling of non-recyclable plastics" at Thadomal sahani college for Techfest held under IICHE (Indian Institute of Chemical Engineers) (2019)
- Presented a review paper on design of horizontal distillation column at ICT Mumbai (2019)
- Awarded 1st prize for poster presentation on Science day. (2018)
- Led a team of 4 for Indian Innovation Challenge Design Contest in developing a SMART Helmet. (2018)

CERTIFICATIONS

- Natural Gas Engineering (2019)
IIT Guhuwati
- Health and Chemicals (2020)
John Hopkins University
- Data analysis (2020)
Internshala
- Zero Liquid Waste Discharge (2020)
Bhartiya Vidhyapeeth
- Industrial Safety (2020)
Tatya Saheb Kore Institute of Engineering and Technology