

SAARANSH SAXENA

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PROFESSIONAL SUMMARY

Dynamic, motivated and detailed oriented professional with good knowledge of chemical engineering domain while working on both research and EPC projects. Seeking to take the next career step with respected organization while exceeding organization's expectations and adding value based on the skills that I have acquired.

EDUCATION

Master's in Chemical Engineering – *University of Southern California (USC), Los Angeles (GPA – 3.84/4)*

Aug 2017 - May 2019

Bachelor of Technology in Chemical Engineering - *VIT University, Vellore (GPA – 9.27/10)*

Jul 2013 - May 2017

INDUSTRIAL WORK EXPERIENCE

Chemical Engineer – *Polytech Paints, Rajkot (India)*

Jul 2018 – Sep 2018

- Stream-mapped the entire paint manufacturing process and discussed about the changes that could be done to reduce the cycle time, save labor and operational cost and increase the production efficiency
- Assisted in process optimization by suggesting ways to boost the production efficiency by 20-25% by reducing the cycle time and also the production cost by around 15% following Lean Management techniques.
- Suggested ways to improve the process safety measures (LOPA, SIL, SOP), reduce hazardous waste to ALARP levels and working principles followed at the company for safely handling chemicals and better work efficiency

Thermal Engineer – *TechnipFMC, Delhi (India)*

Jan 2017 – May 2017

- Successfully completed projects on designing and troubleshooting Heat Exchangers using HTRI while implementing upcoming techniques on effectively troubleshooting heat exchangers for industrial usage
- Developed expertise in HTRI while designing single Shell and Tube heat exchangers, Reboilers and air coolers and prepared corrective action reports for troubleshooted heat exchangers for clients
- Performed thermal analysis for exchangers and determined if specifications are realistic, estimated the risk exposure and performed CFD studies in order to have inherently safer designs for heat exchangers
- Skilled in operating HTRI software, design concepts for heat exchangers, and experience in risk analysis for industrial operations

Pipeline Engineer – *Technip, Delhi (India)*

Jun 2015 – Jul 2015

- Headed a project on optimizing transportation of fluid through a pipeline that involved performing hydraulic calculations and risk assessment which greatly helped in developing problem solving and decision-making skills
- Performed calculations on pipeline sizing, compressor design and its placement using API standards which further helped in optimizing capital and operating costs thus reducing entire project's cost evaluation
- Made PFDs for the project using AutoCAD and performed tasks on reviewing and updating PFD's and P&ID's
- Expertise in reviewing and updating PFD'S, design and optimization, cost-benefit analysis

CUSTOMER RELATIONS EXPERIENCE

Customer Service Representative – *USC Housing and Maintenance, Los Angeles*

Jul 2018 – May 2019

- Specialized in issue addressal wherein resolved member complaints which developed problem solving Skills
- Underwent seriously enforced safety training and used knowledge so as to be able to mitigate potential workplace and residential hazards

LEADERSHIP EXPERIENCE

Vice President – *Viterbi Graduate and Professional Programs (USC), Los Angeles* Jul 2018 – May 2019

- Head of event organizing committee, which helped develop confidence and assertiveness in decision making
- As a leader mission was to increase diversity and inclusion of graduate students in the daily activities
- Guided and supervised the new members and volunteers on how to organize and set up events which helped in developing leadership and communication skills

ACADEMIC PROJECTS

Management of Engineering Team – *University of Southern California* Jul 2018 – Jan 2019

- Headed a team project to analyze the teams working in Boeing on the basis of their key performance indicators
- Collected data by carrying out surveys and subsequently performed the data analysis
- Identified Boeing's dysfunctions and provided them with recommendations utilizing the LEAN and Six Sigma methodologies on how to carry out projects effectively

Analysis of etching on wafer – *University of Southern California* Jan 2018 – Jul 2018

- Led a four-member team utilizing machine learning methods to understand the variability in an etching process and suggested for efficient ways to replace wafers for semiconductor production using R- software
- Performed root cause and FMEA analysis to find out the reason for the variability in the etching process
- Demonstrated that recycled wafers may be used as a cost-efficient substitute for virgin wafers which helped me gain insights on quality control (QC) and statistical process control (SPC)

Carbon Sequestration of Natural Gas – *VIT University* Jul 2016 – Dec 2016

- Designed a pilot plant for carbon sequestration of natural gas with use of amine based solvents using Aspen Plus
- Performed material and energy balance for all the major components (Absorber, Stripper, Heat Exchanger and cooler) involved in the carbon sequestration of Natural gas (MDEA process)
- Used PLC programming to control the operating parameters (like Temperature and Pressure) of the pilot plant
- Performed cost estimation and calculated the Total Capital Investment required for the plant and performed profitability analysis and calculated the ROI and payback period

SKILLS AND CERTIFICATIONS

- **Technical:** R-Software, Aspen Plus, Matlab, Auto CAD, Aloha, Marplot, Minitab, PLC, Microsoft Office (Word, PowerPoint, Excel, Outlook)
- **Other:** Process Design, Process Optimization, Process Modeling, Process Safety, HAZOP, Troubleshooting, Pipeline Design, Line Sizing, DMAIC, LEAN, Six Sigma, Process Optimization, Feasibility Studies, Documentation, Process, Quality Control, Project Management, OSHA, NIOSH, NFPA, DOT, Safety Integrity level (SIL), ALARP, RCRA, CERCLA, SARA, SOP, ASME Standards, API Standards, Statistical Process Control (SPC), Quality Control (QC), FMEA, Design of Experiments (DOE)
- **Six Sigma Green Belt Certified:** Management and Strategy Institute (MSI), USA
- **GHS and OSHA Hazardous Communication Certified:** 360Training, USA
- **HAZWOPER 24 Hr Certified:** 360Training, USA
- **PLC Programming Certified:** Udemy (In Progress), USA

ACHIEVEMENTS

- Received **Dean's Scholarship** from **University of Southern California (USC)** towards my master's program
- Awarded with **Achiever's Award** from **VIT University** in the year 2016
- Received **Merit Scholarship** from **VIT University** for the years 2015 and 2016