

SARVESH ANAND NADKARNI

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EDUCATION

- North Carolina State University, Raleigh, NC** August 2024 – Present
PhD in Chemical Engineering
- North Carolina State University, Raleigh, NC** August 2022 – May 2024
Masters of Science in Chemical Engineering | CGPA: 3.6/4
- Thadomal Shahani Engineering College, University of Mumbai, India** August 2017 – July 2021
Bachelor in Chemical Engineering | CGPA: 9.12/10

EXPERIENCE

- Graduate Research Assistant - Product Development** January 2023 – May 2024
North Carolina State University *Raleigh, NC*
- Synthesize polymer microgels, study pH-dependent component interactions and rheology of carbopols and Carboxylated Nanodiamonds on DHR-3 rheometer under the guidance of Dr. Saad Khan
 - Enabled integration of nanodiamonds in the gels which provide a UV filter not present in Polyacrylic acid and experimenting with varying concentrations of cND (0.01-0.2%)
 - Analysed the prepared gels using Transmission Electron Microscopy (TEM) to study the reason behind the aggregation of molecules and proposed a hypothesis for the same
 - Executed the setup of experimental protocols for UV-visible Spectroscopy, conducting thorough data analysis and hands-on testing to calculate the SPF of samples in the UV range, contributing to improved product performance
- Rashtriya Chemicals And Fertilizers Limited** December 2019
Process Engineering Intern *Mumbai, India*
- Conducted comprehensive analysis of manufacturing process and data for Nitric Acid production at 60% strength, with a plant capacity of 750 metric tons per day
 - Evaluated the quality and cost-effectiveness of different raw materials, including NH₃-99.5%, equipment used, and the data collected in the process
 - Prepared and delivered a comprehensive report analyzing production efficiency and identifying cost-saving opportunities for the Nitric Acid plant, within a month-long internship period

PROJECTS

- A DETAILED STUDY OF ENERGY STORAGE SYSTEMS** August 2020 – May 2021
- Collaborated with a team of three to conduct in-depth research, evaluate key components of Energy Storage Systems (ESS), such as evolution, classification, comparison, current market scenario, and applications, and compiled the findings into a comprehensive report, contributing to enhanced industry knowledge
 - Applied fundamental principles to assess efficiency calculations of Pumped Hydro Storage Systems and AA-CAES; conducted a detailed comparison with existing projects, resulting in a 10% enhancement in overall efficiency
 - Devised and implemented an innovative integration framework, harmonizing CAES technology with renewable energies, resulting in an exceptional 55% enhancement in the system's overall efficiency
- VOLUNTEER OF NATIONAL SERVICE SCHEME (NSS-TSEC)** June 2018 – June 2020
- Executed and promoted impactful community activities including tree plantation and blood donation drives, reaching 500+ participants, as part of NSS-TSEC
 - Completed 240 hours of community service, positively impacting the lives of residents in Neral village, and volunteered to teach 50+ underprivileged students to foster educational development

TECHNICAL SKILLS

- Aspen Plus, AutoCAD, Mathematica, MATLAB, Microsoft Excel, Python

FELLOWSHIPS AND AWARDS

- Secured Provost's Doctoral Fellowship at NC State
- Achieved All India Rank (AIR 2) in National Engineering Olympiad representing TSEC
- Secured award for 1st Rank in Chemical Branch in Third Semester
- Certificate of Appreciation for constructing 30+ Continuous Contour Trenches under Watershed Management program in Neral