

Rushi roy
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EDUCATION

Tufts University, Medford, MA May 2025
Bachelor of Science in Chemical Engineering

Relevant Courses: Physical Chemistry of Polymers, Hazardous Waste Treatment Technology, Chemical and Biological Separations, Surface and Colloid Chemistry, Reactor Design, Data Structures, Process Dynamics and Controls

ENGINEERING EXPERIENCE

Aramco Services Company May 2025 – Present
Gas Separations Intern, Cambridge, MA

- Separated gas molecules for experiments by casting membranes for post processing and characterization
- Experimented with various hollow fiber dopes and conditions by separating and testing membranes using the laserquadra knife
- Functionalized membranes using cross-linking techniques
- Investigated mechanical and thermal properties of various polymers by examining molecules utilizing various strength microscopes
- Conducted single gas tests for performance testing by running separated gas molecules through functioner machine

Smart Polymers, Membranes and Separations Laboratory

Undergraduate Research Assistant, Tufts University, MA January 2025 – May 2025

- Manufactured polymer membranes and dyes for filtration tests by using a staking polymer technique
- Collected and modeled diffusion rate data on different dyes utilizing a diffuser
- Synthesized zwitterionic copolymers for brackish water testing
- Characterized novel copolymer membranes using FTIR and TGA
- Tested frack wastewater flux and fouling resistance by using a frack measurer

Bits Bytes & Bots

Instructor, Anytown, NY June 2025 – August 2025

- Taught multiple classes involving Robotics, Game Maker, and Scratch by creating lesson plans and providing weekly instruction
- Guided 20-30 campers through their daily schedule and led fun social transition activities
- Solved any issues that arose between students and with the camp's computers by utilizing training in conflict resolution

SKILLS

Lab: Polymer synthesis, characterization, NMR, DSC, FTIR, TGA, DMA

Computer: Visual Basic, C++, Python, HTML and CSS ,data science, web developr, SQL

Language: Proficient Spanish