

PRATEEK SAXENA

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Summary

BITS Pilani dual-degree student blending chemical engineering with data analytics. Built a Hartree-Fock quantum solver, a virtual lab for 200+ students, and optimized industrial processes at SAIL. Passionate about solving real-world problems with code, data, and curiosity.

Academic Details

M.Sc.Chemistry + BE Chemical Dual Degree
BITS Pilani

Expected in 01/2026
Pilani

Skills

- Data Analytics
- Python3
- Machine Learning
- NumPy
- Pandas
- Scikit-Learn
- Front-End Web Development
- React.js
- DSA

Projects

Hartree-Fock Quantum Chemistry Solver

Built a C++ simulation tool for molecular orbitals using SCF and custom integral routines.

Chemical Engineering Lab Simulator

Created a virtual platform aiding 200+ students in conducting interactive experiments.

Bioplastics Sustainability Study

Analyzed agro-waste-based bioplastics for food packaging using data-driven LCA and performance metrics thereby creating a dataset for the analysis of Bioplastics based Startup

Sales insights data analysis project

Built interactive Power BI dashboards to track revenue, profit trends, and customer segments using SQL, Power Query, and DAX while also performing EDA on the dataset

Work Experience

Research Analyst & AI/ML Intern
CSIR-Indian Institute of Petroleum

07/2025 to Current
Dehradun

- Working at CSIR-IIP in the **Climate Change and Data Science [CCDS] Department**, focusing on data analytics for sustainability and clean energy projects.
- Conducting Life Cycle Assessment (LCA) studies and emissions analysis for industrial and energy systems.
- Developing and applying machine learning models for climate data interpretation and decision support tools.

Operation & Strategy Intern
Steel Authority of India Limited

05/2023 to 08/2023
Rourkela

- Optimized NH3 recycling, reducing waste & boosting efficiency by 10%.
- Improved machinery operations through team coordination.

Certifications

- Google Data Analytics Expert Certification
- Postman API Fundamentals Student Expert
- Google Get Started With Python
- Google Foundations of Data Science

Positions Of Responsibility

Student Faculty Council, Chemical Engineering – BITS Pilani
Aug 2024 – Present

- Represented student voice in academic discussions; advocated for curriculum upgrades and practical exposure.

Core Team Manager, NSS Oasis Fest – BITS Pilani
Aug 2022 – Oct 2022

- Led 50+ volunteers; managed logistics and fundraising, generating ₹2L+ in 3 days during the flagship college fest.