Durgam Rachana
Third Year Undergraduate
Discipline of Chemical Engineering
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ACADEMIC DETAILS

Degree	Specialization	Institute	Year	CPI/%
B.Tech.	*Chemical Engineer*	IIT Gandhinagar	2022-Present	6.8
Class XII	*Physics, Chemistry, Maths*	COE Gowlidoddi	2021-2022	93.7
Class X		ZPSS Sirpur-Town	2019-2020	100

PROJECTS

- **Battery Cooling Systems** [Jan'24-April'24]
  (Prof. Biswajit Saha, IIT Gandhinagar) | *Project Link*
  - Conducted experiments comparing air, liquid, and combined air-liquid cooling systems for battery management by designing and implementing experimental setups using iron rods, copper tubes, fans, and water pumps, and analyzing temperature regulation and heat dissipation to determine the effectiveness of different cooling methods.
  - Demonstrated the superior efficiency of combined air-liquid cooling systems and identified liquid cooling as the most cost-effective method for battery cooling, validated by data analysis, appropriate calculations, and experimental results.
- **Personal Portfolio Website** [May'24-July'24]
  Project Link Live Link
  - Developed and deployed a fully responsive personal portfolio website using HTML, CSS, and JavaScript, showcasing a modern design with intuitive navigation and interactive elements to boost user engagement.
  - Enhanced site usability, accessibility, and visual appeal by integrating dynamic navigation menus and tabbed content sections for skills, experience, and education.
- **Mathematical Modeling of Glucose Control in Diabetic Patients** [Aug'23-Oct'23]
  (Prof. Dilip Srinivas Sundaram, IIT Gandhinagar) | *Project Link*
  - Developed a numerical solution using the Bergman minimal model, solving ODEs for glucose and insulin dynamics with the fourth-order Runge-Kutta method, to optimize glucose control in diabetic patients.
  - Integrated continuous glucose monitoring and insulin pump data for better diabetes management, demonstrating effective maintenance of normal blood glucose levels through simulations.

TECHNICAL SKILLS

- **Languages:** Python, C, HTML, CSS, JavaScript
- **Tools:** MATLAB, Autodesk Inventor Professional, Arduino UNO, VS Code, Github , Autodesk Fusion 360
- **Libraries:** Numpy, Pandas, Matplotlib, Sklearn , Scipy, Seaborn

EXTRA-CURRICULARACTIVITIES

- Performed dance routines as an active participant in the college cultural event, Eureka.
- Practiced daily yoga to enhance physical and mental well-being.