Abey Vignesh
Pre-final Year, RGIPT | Chemical Engineering Undergraduate
Male | 03/09/2000
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,A consistent, hard-working individual aiming to obviate barriers that can fuel the inclusive development of the World and economy

EDUCATIONAL BACKGROUND

COURSE	INSTITUTE	CPI/CGPA/%	Year
B.Tech in **Chemical Engineering**	Rajiv Gandhi Institute Of Petroleum Technology	8.11/10* ***Up to 6th Semester**	2019-2023
XII, (CBSE)	Maharishi International Residential School	77%	2018
X, (CBSE)	Delhi Public School	9.4/10	2016

INDUSTRIAL VISITS

1.)Understood and seen the different ammonia and urea synthesize units of the plant
2.)Understood various industrial damage losses and how to manage them

ACHIEVEMENTS & HONOURS

1.)Qualified IIT JEE advance in 2019
2.)Scored 96.99 percentile in jee mains in 2019
3.) Accepted manuscript of research article topic - Mechanically Robust Anisotropic Hydrogel-Organogel Conjugates for Soft Actuators with Fast Response Time and Diverse Bi-Axial Programmable Folding Ability in acs chemistry of materials journal.

POSITION OF RESPONSIBILITIES

Worked in Gyan Arpan(the social club of rgipt) as a math teacher for class 9th from the year 2019-2020, making notes and worksheets for class 10 th students from the year 2020-2021, as an English teacher from 2021-2022
1.) Working in this club was a social service I taught students studying nearby remote areas of my colleagues who were unable to afford a better education for free.
2.) Learned how to manage a class (Management skills)
3.)Learned effective communication and presentation skills so that students can understand what I am teaching

SKILLS

1.) Communications
2.) Team management
3.)Adaptability
4.)Critical thinking
5.) Research and Analysis
6.) Professional software Ms excel, advance excel, Ms office, Ms. PowerPoint etc
7.)Open cv (artificial intelligence), Matlab(basics), python , c , c++ , java
8.)Chemical engineering software – Comsol(Finite element method), Aspen, Autocad.

RESEARCH

1.)TOPIC **- Mechanically Robust Anisotropic Hydrogel-Organogel Conjugates for Soft Actuators with Fast Response Time and Diverse Bi-Axial Programmable Folding Ability."(LINK)**

Key points:

1.) Production of hydrogel, organogel
2.) integration hydrogel and organogel and use it for soft robotics application
3.)How to handle chemicals, the importance of reaction conditions(pressure, temperature)
4.)How to find out the application of laboratory synthesized materials
5.)Theoretical simulation – which can save a lot of money, AutoCAD(widely used in industry), designing, presentation skills(ms excel, ms PowerPoint)
6.)Machine learning, artificial intelligence(open cv) –a hot topic of today's world
7.)Team management, how to lead a team, and other professional ethics and soft skills required for projects

2.)TOPIC - **A review on recycling and Extraction of Rare Earths elements (REE)& Other Metals Through Microfluidic device**

1.) Reviewed how our various process variables are affecting the percent REE extracted
2.) Reviewed what are the different types of extractants available
3.) Learned presentation skills a lot more than in the previous project
4.)Got more idea of how to perform a liquid-liquid extraction process in a continuous manner.

3.)TOPIC - **Effect of nanoparticles on mechanical properties of hydrogel**

1.) Nanoparticles are widely used in industries so it is important how to handle the nanoparticles
2.)Synthesis and integration of nanoparticles and hydrogel
3.)Analyzing hydrogel mechanical properties and how it is influenced by nanoparticles by using various instruments like SEM, UTS, DMA, etc which are used in industries and I learned how to deal with these high cost equipment
4.)Learned how to make solvents(dry ether) for a reaction.

4.)TOPIC – **Analyzing the stability of Cluster Compounds using DFT (Density Functional Theory) for Sodium-ion battery application**

1.) Making of different kinds of cluster compounds in the materials studio library
2.)Analyzing the stability of these cluster compounds in HPC(High-Performance Computer) by using DFT
3.)Condensing these Cluster Compound to form a 1 D Nano Wires
4.)Analyzing the stability of these 1 D nanowires
5.) Checking whether these 1 D nanowires can use Sodium-ion battery application