PDEU PANDIT DEENDAYAL ENERGY UNIVERSITY
UGC RECOGNIZED
Formerly Pandit Deendayal Petroleum University (PDPU)

SOT SCHOOL OF TECHNOLOGY
NAAC Accreditation with "A++" Grade & CGPA of 3.52 out of 4.00
NBA AICTE ACCREDITED BY

NEWSLETTER

JULY-OCTOBER 2023 ISSUE | 46

DEPARTMENT OF MECHANICAL ENGINEERING

Mech-a-Tech

The Newsletter aims to provide monthly details of the Department of Mechanical Engineering, School of Technology at Pandit Deendayal Energy University

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Message From Director

Prof. Dhaval Pujara
Director,
(SOT)

Dear Readers,
Greetings!

At the outset, I congratulate the Department of Mechanical Engineering, School of Technology, Pandit Deendayal Energy University (PDEU), Gandhinagar on its upcoming Newsletter. These monthly newsletters attest to their passion, perseverance, and innovation. For us, this issue is very important as we have received NAAC accreditation of A++ with a CGPI of 3.52 out of 4.00. A matter of equal joy to share that the Department of Mechanical Engineering has received an extension of NBA accreditation for the next three years. These milestones could not have been achieved without the support of all the stakeholders. I take this opportunity to thank all the stakeholders.

Message from Head of Department

Dr. Jatin Patel
HOD
(Mechanical Engineering)

Welcome to the Department of Mechanical Engineering, School of Technology, Pandit Deendayal Energy University, Gandhinagar! It's immense pleasure to present this bimonthly newsletter.

Mechanical Engineering Department is the dynamic and vibrant department with the blend of young and experienced Faculty. Department is actively involved in academic as well as research work in current areas of Mechanical Engineering and multi-disciplinary streams. The students are benefited with state of the art laboratories in various areas. I, as a head of the department would like to thank all the faculty members, non-teaching staffs and students for their limitless support and sincere efforts for the betterment and development of the department. On this occasion, I congratulate all the team members of the editorial board for bringing up this issue in a better shape. My best wishes to all for their bright carrier and successful life.

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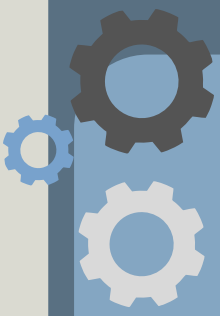

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E-Fuels : A Promising Solution for the Future of Green Mobility

-EDITORIAL (SIMRAN RASDHARI)

E-fuels, also known as synthetic fuels or electrofuels, are emerging as a viable solution to decarbonize the transportation sector, particularly in areas where electrification is challenging, such as aviation, shipping, and long-haul trucking. Generated from renewable (solar or wind power, for example) or decarbonised electricity. This raw material differentiates them from biofuels, which are primarily produced from biomass.

By drastically reducing the harmful emissions associated with combustion engines, e-fuels play a key role in decarbonisation strategies. Taking their whole production cycle into account, their carbon footprint is a lot lower than oil-based fuels.

Types of E-fuels: Catering to Diverse Needs

E-fuels are broadly categorized into two main groups based on their final form: gas or liquid.

Power-to-gas: This category encompasses synthetic methane and ammonia.

Power-to-Liquid: This group includes synthetic methanol, crude oil, kerosene, and diesel.

Diverse Applications of E-Fuel E-fuels hold promise for decarbonizing various transportation sectors.

Aviation: E-kerosene, a synthetic equivalent of conventional kerosene, could potentially fulfill up to 40% of aviation energy demand by 2070.

Maritime: E-methanol, produced from green hydrogen and captured CO2, can serve as a fuel source for ships.

Rail and Road: Hydrogen, along with synthetic fuels derived from hydrogen and CO2, can contribute to decarbonizing rail and road transportation.

Unveiling the Benefits of E-fuels: A Brighter Future

E-fuels offer several advantages over fossil fuels, including:

Sustainability: E-fuels significantly reduce greenhouse gas emissions as they are produced from renewable sources and capture CO2.

Infrastructure Compatibility: E-fuels can be utilized in existing engines and infrastructure, facilitating a smooth transition.

High Energy Density: E-fuels possess a high energy density, making them suitable for applications where space and weight are constrained.

Addressing the Challenges: Paving the Way for E-fuels

Despite their promise, e-fuels face certain hurdles:

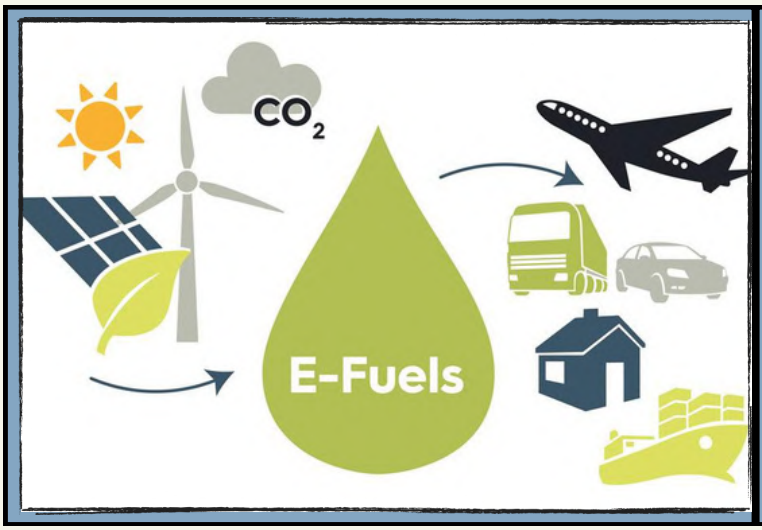
High Production Costs: The current production costs of e-fuels are higher than those of fossil fuels.

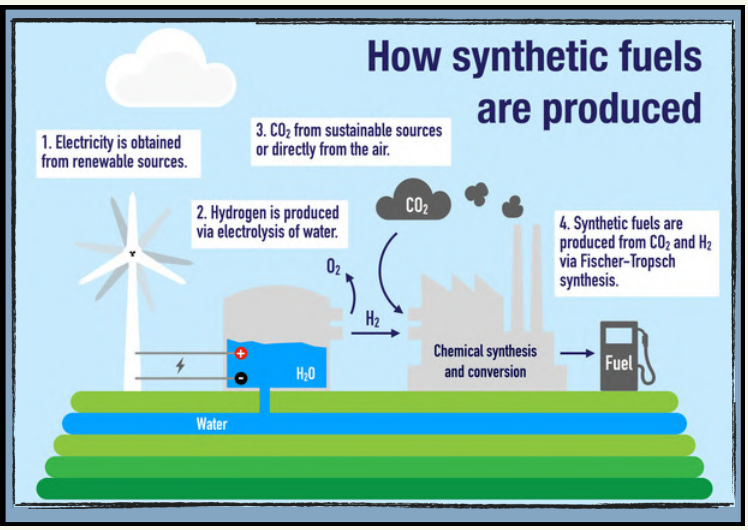
Scalability: Large-scale production requires substantial investments in infrastructure and renewable energy capacity.

Public Perception: Addressing public concerns regarding safety and environmental impact is crucial.

E-fuels: A Beacon of Hope for a Sustainable Future

With ongoing research, development, and investment, e-fuels have the potential to revolutionize hard-to-electrify sectors and play a significant role in decarbonizing the transportation industry, paving the way for a cleaner and more sustainable future.





Faculty Achievements

Awards

Prof. Vishvesh Badheka , Dr. Vivek K. Patel, Dr. Jaykumar Vora and Dr. Rakesh Cahudhari are recognised as top 2% scientists worldwide by the prestigious Stanford University.

We are incredibly proud of these four outstanding scientists and their contributions to the field of mechanical engineering. Their work is an inspiration to us all, and we are confident that they will continue to make significant contributions in the years to come.

Congratulations to Prof. Vishvesh Badheka, Dr. Vivek K. Patel, Dr. Jaykumar Vora, and Dr. Rakesh Cahudhari on this well-deserved recognition!

Expert Talks Organised

Prof Vishvesh J Badheka organized an expert talk on "Industry 4.0" by Dr. Vishal Wankhede, Assistant Professor, IIM Bodhgaya (Ex-Faculty, PDEU) (2/7/2023 & 28-07-2023)

Dr.M.B.Kiran organized an expert talk on "Significance of Project Management in Thermal Power Plants" by Mr.R.D.Chauhan,National Thermal Power Corporation, Limited, (22-08-2023)

Dr Anirudh Kulkarni organized an epert talk on "Fluoropolymer Applications in Electric Vehicles" by Mr Sanjay Bhan ,Deputy Unit Head, Gujarat Fluoro Chemicals at Indus University (6/10/2023)

Dr. Ramesh K. Guduru organized an epert talk on "Soft Lithography and Surface Texturing" by Dr. Sriharitha Rowthu,Assistant Professor, Materials and Metallurgical Department, IIT Gandhinagar (13-10-2023)

Dr. Santosh Bharti organized an epert talk on "Large Language Model with Prompt Engineering" by Dr. Parth Mehta, Parmonic (20-10-2023)

Industrial Interaction

Dr.M.B.Kiran organized **“Visit to Indian Space Research Organization”** for faculty and staff on 4 July 2023.

Dr. Abhishek Kumar & Dr. Vishvesh Badheka organized " **Visit to ATIRA (Ahmedabad Textile Industry's Research Association), Ahemdabad**” for students of M.Tech 2nd Semseter students on 6 & 8 June 2023

Dr. Jatin Patel organized "***Visit to Voltas Beko, Sanand, Gujarat”*** for the students of B.Tech Sem 7 on 29 July 2023

Dr. Kishan Fuse organized "***Visit to Atul Auto Limited”*** for the students of B.Tech Sem 5 on 4 September 2023

Dr. Abhinaya Bhasuru organized **"Visit to Ingersoll Rand Limited Ahemdabad”** for the students of B.Tech Sem 5 on 24 August 2023

Dr. Jatin Patel organized **“Visit to Muni Seva Ashram”, Vadodara”** for the students of B.Tech Sem 5 on 6 October 2023

Skill Development Programs Organised

Dr. Pavan Kumar G Organized **Events at Siemens CoE** from 22-26th May 2023

Dr Anirudh Kulkarni organized **Basics of OpenFOAM** from 22-26 May 2023

Dr Vivek K. Patel organized Skill Development Program In **Thermal Engineering** from 15-19 May 2023

DR OJAS SATBHAI and Dr Anirudh Kulkarni organized One Day Hands-on Training Program on **Basics of CFD** on 13 may 2023

Dr. Nirav Patel and Dr. Bhasuru Abhinaya organized **Farewell Program** of Mechanical Student-2023 on 16 May 2023

Skill Development Programs Organised

DR.Manjeet Keshav organized **Placement Talks:** Lets speak the unspoken words on 16 May 2023

Dr.Anurag Mudgal organized Skill Development Program In **Waste Water Treatment & Management** between 15-19 May 2023

Dr. Bhasuru Abhinaya Srinivas and Dr. Rahul Deharkar dual organized One Day Hands-on Training program on **Wind tunnel, Pump and Turbine** on 6 May 2023

Prof Vishvesh J Badheka organized **Young Professional Skill Development Program** between 15-19 May 2023

Prof Vishvesh Badheka, organized an inspiring Vist for the MBA students from SPM to **additive manufacturing laboratory** on 4 July 2023

Dr. Jatin Patel organized **“Visit to Muni Seva Ashram”, Vadodara”** for the students of B.Tech Sem 5 on 6 October 2023

Skill Development Programs Organised

Dr.Vivek Jaiswal conducted **SDP on Power Engineering** on 9 JUN 2023

Dr.Anurag Mudgal coordinated **Advances in Wastewater Treatment and Management between 17-21 JUL 2023**

Dr.Anurag Mudgal conducted a Skill Development Program **on Water Treatment** on 9 JUN 2023

Prof Vishvesh J. Badheka arranged a **Train the Trainer (Skill Development Programma -3D Printing under IQAC) between** 10-14 JUNL 2023

Prof Vishvesh J Badheka directed an Young Professions Skill Development Programme Organized by **IIW-PDEU Students Chapter** between 17-21 JUL 2023

Dr. Nirav Patel and Dr. Vivek Patel arranged **Orientation Program** of B. Tech. Mechanical Engineering sem 3, 5 and 7 students and PG Mechanical Engineering (Thermal, Design and Manufacturing) Sem 1 studnets on 31 JUL 2023

Skill Development Programs Organised

Prof Vishvesh J Badheka arranged **One-Day Workshop** on Advanced Manufacturing between 17-21 JUL 2023

Prof Vishvesh J Badheka and Dr Manoj Sahni put in order an **Composites Industries National Conference** between 4-5 JUL 2023

Dr Anirudh Kulkarni leaded a 6 hour **SDP** for Staff of School of Technology

Dr Anirudh Kulkarni Managed an event **Write and Present - A Half Day Bootcamp** on 8 AUG 2023

Alumni Interaction

Mr. Gigabhai Bhammar of M.Tech 2015 Batch interacted with **Dr. Vivek K. Patel** on 26 May 2023.

Mr. Rutvik Shah (B.Tech 2018),Mr. Hem Shah and Mr.Sagar Suthar (B.Tech 2019) attended **BoS/FoET/Academic Council/IQAC Meeting** and interacted with **Dr. M.B Kiran** & **Dr. Abhishek Kumar** on 15 May 2023

Keval Bhavsar (MTech Design - 19) Markand Pathak (MTech Mfg - 16) Rikkin Acharya (MTech Design - 21) Sagar Sutar (MC14) Rutvik Ghiya (MC17) interacted with **Dr. Abhinaya Bhasaru on 16 May 2023**

Ms. Dhenuka Mahant of B.Tech 2022 delivered **"A Lecture for the Current Batch"** on 17 October 2023

Activities

Live Test Run of Veteran Car Nakshatra 2.0 at Tesseract 9.0, TEAM KAIZEN

The Mechanical Department is thrilled to share the remarkable accomplishment of our team, Kaizen, in successfully executing a **live test run** of their veteran car, **Nakshatra 2.0**, at the university's annual Tech-Fest, **Tesseract 9.0**. This remarkable achievement represents a significant milestone in their preparation for the *prestigious international competition*,**Shell Eco-Marathon 2024**.

Beyond the successful test run, Team Kaizen also hosted a **showcase event** to introduce our team and our cars to a wider audience. This two-day event initiative aimed to inspire and engage younger students, cultivating a new generation of engineering enthusiasts.

We recognize the invaluable contributions of team members of Kaizen including:

(ME):Shilp Valand(Team Manager),Ansh Shah,Komal Singh, Dev Kahodarıya,Meet Shah ,Ankur Lal, Simran Rasdhari,Vatsal Macwan, Dharmik Panchal,Rishi Patel, Akshat Vyas
(AE):Pratham Patel
(ECE):Rhythm Gupta,Krishna Arjariya
(ICT):Aman Joshi, Vedant Patel, Bhagirath Patel,Harshal Randive,Kirtan Sakriya,Jay Ahuja
(EE):Dattrajsinh Piludariya,Satyarth Katva
(CS):Greshi Doshi
(SLS):Nandana Mahesh

Team would like to express their deepest gratitude to **Prof. Dhaval Pujara(Director,SOT), Prof. Anirbid Sircar(Director,SOET), Prof. Jatin Patel(HOD), Dr. Ankur Chaurasia, Dr. Amit Sant (Electrical Department) (Faculty Advisors)**, and **PDEU** for their unwavering support and guidance throughout their journey. Their steadfast belief in team's abilities has been instrumental in driving their success.

We congratulate Team Kaizen on their outstanding achievement and wish them all the best for Shell Eco-Marathon 2024!

Lecture on the "Basics of Clean Room in" HVAC", ISHRAE Ahmedabad Chapter

DATE: SEPTEMBER 22, 2023

The event held at **PDEU** on **September 22, 2023,** brought together the **ISHRAE Ahmedabad** Chapter members, including **Mr. Rajendra Mevada,Dr. Nanji Hadia** along with the university's students to exchange valuable knowledge and insights into the HVAC & R industry.

The event commenced with a warm welcome extended to the ISHRAE Ahmedabad Chapter members, expressing gratitude for their willingness to contribute to the student's education**. Trupal Patel,** with **four years of experience** in the HVAC industry, introduced ISHRAE and highlighted career prospects in a succinct presentation, setting the stage for a captivating session.

Vijay Panchal, an industry veteran with **27 years of experience** and the **Director of Vision HVAC Pvt.** Following the lecture, an interactive question and answer session allowed students to engage directly with the speakers, deepening their comprehension of HVAC concepts.

Rajendra Mevada from PDEU chapter, recognizing their invaluable contributions to the event's success.

In conclusion, the PDEU - ISHRAE Ahmedabad Chapter event of September 22, 2023, was a resounding success.

It enriched students' knowledge of the HVAC & R industry and its career prospects through informative sessions and engaging discussions.

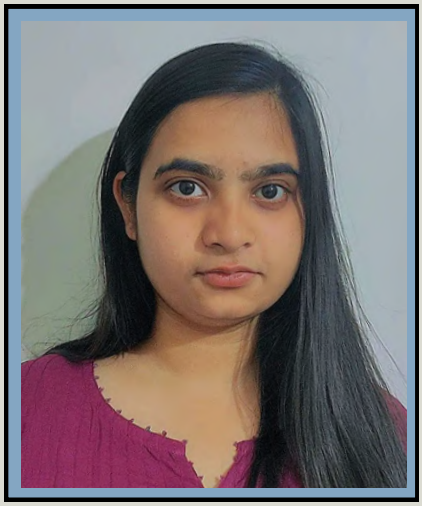
The collaborative efforts of **PDEU** and the **ISHRAE Ahmedabad** Chapter, along with the presence of **Mr.Rajendra Mevada**, made this event possible, and it promises to be a precursor to more enriching experiences in the future.

We would like to thank PDEU - ISHRAE Ahmedabad Chapter for organizing this informative and engaging seminar and we would be greatful to have such more insightful events in the future.

Message From Students

Heartiest congratulations to our exceptional 4th year mechanical engineering students on securing stellar placements! Your unwavering dedication, perseverance, and passion for engineering have paved the way for a bright future ahead.We are incredibly proud of your accomplishments and excited to see you make a positive impact on the world.

Komal Singh, Analog Devices



Securing My Dream Job at Analog Devices: A Journey of Perseverance and Guidance:

As I stand at the threshold of graduating from the esteemed Mechanical Engineering department of PDEU, I am filled with a profound sense of gratitude and accomplishment. My recent placement as a **Supply Chain Analyst** at **Analog Devices**, a global leader in the design and manufacturing of high-performance semiconductors, marks a significant milestone in my professional journey.

Securing this coveted position was a culmination of unwavering dedication, meticulous preparation, and the unwavering support of my mentors and university. The placement process itself was rigorous and competitive. I meticulously prepared for each stage of the selection procedure, including resume writing, aptitude tests, group discussions, and personal interviews but resources provided by *Career Development Cell,* such as mock interviews, resume reviews, and pre-placement workshops helped me to hone my skills and prepare effectively for the placement process.

Tips for Juniors

As I reflect on my journey, I offer the following advice to my fellow juniors who aspire to achieve similar success in their chosen fields:

1. **Embrace continuous learning**
2. **Seek guidance and mentorship**
3. **Leverage university resources**
4. **Network and build relationships**
5. **Believe in yourself**

Meet Shah, Arcelor Mittal Nippon Steel

From PDEU to ArcelorMittal Nippon Steel

Dear Readers,

I am thrilled to share my heartfelt gratitude as I embark on a new chapter in my professional journey, having secured the prestigious position of **Graduate Engineer Trainee (GET)** at **ArcelorMittal Nippon Steel**. This achievement is not just a personal milestone but a testament to the unwavering support and nurturing environment provided by *Pandit Deendayal Energy University*, particularly the Mechanical Department and the *CDC*.

The significance of a nurturing academic environment cannot be overstated, and the Mechanical Department at my university exemplified this ethos. The faculty's approachability, encouragement, and passion for the subject not only enhanced my technical knowledge but also instilled a sense of curiosity and a commitment to lifelong learning.

Pandit Deendayal Energy University has been transformative for me. The Mechanical Department, with its dedicated faculty, served not just as educators but as mentors, fostering a deep understanding of mechanical engineering principles. The nurturing academic environment enhanced not only my technical knowledge but also instilled a commitment to lifelong learning.

The *Career Development Cell (CDC)* played a crucial role in my transition from academia to the professional arena. Workshops, seminars, and personalized career counseling sessions equipped me with essential skills for the competitive job market. The collaboration between the Mechanical Department and the CDC created a holistic educational experience, preparing me academically and professionally. Exposure to industry trends, interview techniques, and resume building facilitated by the CDC played a key role in securing my placement at ArcelorMittal Nippon Steel.

Gratitude to the unwavering support of the faculty in the Mechanical Department and the tireless efforts of the CDC. *To my alma mater, Pandit Deendayal Energy University*, and its exceptional Mechanical Department and CDC, thank you for being the guiding lights on my academic and professional journey. I carry the instilled lessons and values proudly into the next phase of my career at ArcelorMittal Nippon Steel.

Dhara Parekh, McKinsey and Company

Securing a placement! Sounds scary right?
To convince an employer that you are the most deserving candidate for a position is a huge challenge. From proving yourself in tests, to overcoming the fear of public speaking, let me say that its not easy. Hey, I am **Dhara Parekh**, a final year student in mechanical engineering. I am placed at **McKinsey and Company**, *the world's biggest consultancy firm* as a **research analyst** in the field of **metals and mining**.

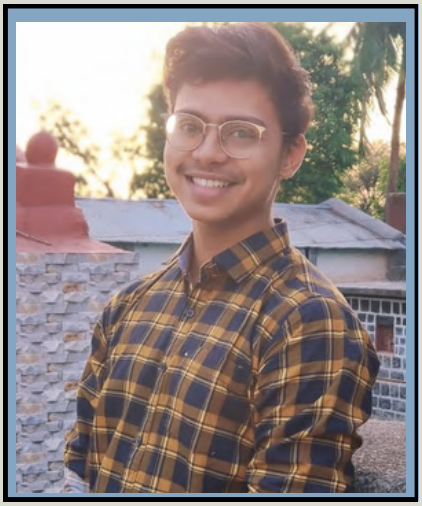
PDEU has always supported the students throughout. We were given special coaching which helped us solve aptitude questions. Numerous sessions on technical writing, giving presentations and public speaking helped us brush up our soft skills. The faculties have gone out of their way to help us in every way possible.

The *career development cell* works hard for the betterment of all students. The support they offer is phenomenal.

Tips for my juniors:

1) Don't be afraid to voice your ideas. Trust yourself. If you have self doubts, start working on them as early as possible.
2) Being afraid of hard-work will not help.
3) Plan ahead for the future. Confusion will make you commit mistakes. Be clear about what you want.
4) Be kind to yourself. None of us are perfect. Its okay to make mistakes.
5) Never be afraid to contact your seniors. They will be the ones who will guide you through in the best possible ways.

Rushang Kulkarni, Aditya Birla Group



Hello! I am **Rushang Kulkarni.** I am writing to express my heartfelt gratitude to the Mechanical Department and the *Career Development Cell* at Pandit Deendayal Energy University for their invaluable support in securing my placement.

Throughout my academic journey at the university, I have been fortunate to be a part of the Mechanical Department, which has consistently demonstrated a commitment to excellence in education and a genuine interest in the success of its students. The department's faculty members have not only imparted knowledge but also provided guidance and mentorship that has been instrumental in shaping my understanding of mechanical engineering.

I would like to specifically highlight the role of the Career Development Cell in facilitating my placement. The CDC played a pivotal role in bridging the gap between academia and industry, organizing workshops and seminars that equipped me with the skills and confidence needed to navigate the competitive job market. The personalized career counseling sessions were particularly beneficial, providing insights into industry trends, interview techniques, and resume building.

The support and encouragement I received from both the Mechanical Department and the Career Development Cell were instrumental in my successful placement in "**Aditya Birla Group**" as a **Graduate Engineering Trainee.** I am grateful for the opportunities they created for students to interact with industry professionals, participate in internships, and attend recruitment drives. These experiences not only enhanced my technical skills but also exposed me to the practical aspects of the field, making me a well-rounded candidate for prospective employers

Mann Bhatt, Analog Devices Inc.

I am delighted to share a significant milestone in my journey with you all. Recently, I have secured a placement at **Analog Devices Inc.** as a **Supply Chain Analyst.**

The Department of Mechanical Engineering has been instrumental in shaping my academic and professional path. The guidance from faculty members, the practical insights gained from projects, and the interdisciplinary approach to learning have undoubtedly contributed to my success. To my professors and mentors, thank you for your unwavering support and dedication to our growth.

A proactive approach defined the journey. While the department's elective courses significantly enriched understanding, the choice of pertinent internships and online certifications stemmed from a personal drive for professional growth. Seeking internship aligned with my career aspirations provided hands-on experience and insights into the professional world, and the selection of online certifications reflected a commitment to continuous learning based on individual research and interests. This experience underscores the importance of personal motivation in complementing the support received from the *Department of Mechanical Engineering* and the *Career Development Cell*.

Lastly, I extend my best wishes to all my juniors reading this as you navigate your own academic and professional journeys. May you embrace challenges, discover your passions, and find fulfillment in every endeavor. I hope that sharing my journey has provided some motivation and insights to inspire your own path forward. Remember, your potential is limitless, and with determination and resilience, you can achieve remarkable milestones. Here's to your success and the exciting adventures that lie ahead. Best wishes, and may your journey be as fulfilling as mine has been.

Urvil Shah, Micron Technology

Dear PDEU Family,

I hope this message finds you in good spirits.

I am **Urvil Shah** and I am excited to share a significant achievement as I, find myself on the brink of completing my final year at PDEU. Recently, I secured a position at **Micron Technology** as a **Associate Engineer, Assembly & Test Engineer** and I am eager to reflect on the journey that led me from the academic grounds of pdeu to one of the leading Semiconductor companies in the world.

As I, navigate the transition from student to working professional, I want to share the insights that have shaped my path.

In my academic journey, I've consistently found guidance from PDEU's Mechanical Engineering Department. The faculty's guidance, the comprehensive curriculum, and the hands-on projects have equipped me with valuable skills. The practical experiences gained during internships not only honed my technical abilities but also exposed me to the dynamics of the industry, contributing significantly to my growth.

To my fellow pre-final-year students and upcoming readers, **I offer this advice:**

- **Optimise opportunities** with a positive approach to challenges, ultimately enriching your learning.
- **Engage in spiritual activities** to elevate your consciousness, practice mindfulness meditation, explore different spiritual traditions, connect with nature, maintain a gratitude journal, seek meaning and purpose, practice compassion, read inspirational texts, participate in community service, and incorporate mindful breathing exercises and yoga for body awareness.
- **Engage in internships**, collaborate on projects, and build a network within and beyond the university. The skills you've developed here are your stepping stones to a successful future, so invest in your growth.
- **Connect with seniors** to gain valuable insights, mentorship, and a deeper understanding of the academic and professional landscape, enhancing your overall growth and success.

As I step into this new chapter at Micron, I carry with me the lessons learned and the support received from the PDEU community.

Thank you PDEU, for being an integral part of my story. I look forward to making the most of my final year and carrying the PDEU legacy into the professional world.

Internships

Ayush Reena (MTech,Manufacturing),ISRO

DURATION: 15 JUNE 2023 TO 30 JUNE 2024

Embarking on an internship in the Quality Department at **ISRO**, with a focus on the project topic of **"Welding Additively Manufactured AlSi10Mg Parts,"** provided a multifaceted experience that seamlessly blended theoretical knowledge with hands-on application. Engaging in this cutting-edge project allowed me to delve into the intricacies of ensuring the structural integrity and quality of components critical for space missions. From understanding the nuances of additive manufacturing to implementing precision welding techniques, every aspect of the project emphasized the importance of maintaining stringent quality standards in aerospace applications.

Securing an internship with ISRO, particularly in a specialized field like welding of additively manufactured parts, demands strategic planning. Researching ISRO's ongoing projects and identifying areas aligned with one's academic background and interests is the initial step. Crafting a tailored application that highlights academic excellence, relevant skills in materials engineering, and a passion for advancing aerospace technologies is essential. Consistent academic performance and a focus on subjects related to materials science and welding techniques enhance the competitiveness of the application.

Pandit Deendayal Energy University (PDEU) played a pivotal role in shaping my journey into the **Quality Department at ISRO,** with a specific focus on welding additively manufactured parts. The university's curriculum, emphasizing both theoretical principles and practical application in materials engineering, provided me with the foundational knowledge required for the intricacies of the project. Engaging in research projects under the guidance of experienced faculty members further honed my skills, preparing me for the technical challenges inherent in aerospace quality control.

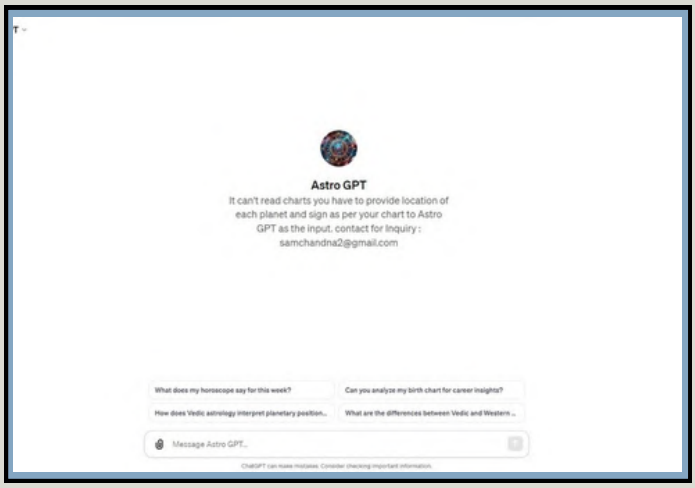
Dr. Vishvesh Badekha sir further streamlined my path to an ISRO internship. Workshops on resume building, interview preparation, and specialized training in quality management practices were instrumental in shaping my application to align seamlessly with the expectations of ISRO's Quality Department. Additionally, the university's emphasis on industry interactions and networking events facilitated my engagement with professionals who offered valuable insights into the field, enhancing the credibility of my application.

Projects Undertaken

Sahil Chandna

DATE: 6 SEP. 2023 -18 OCT. 2023

Topic: Astro GPT



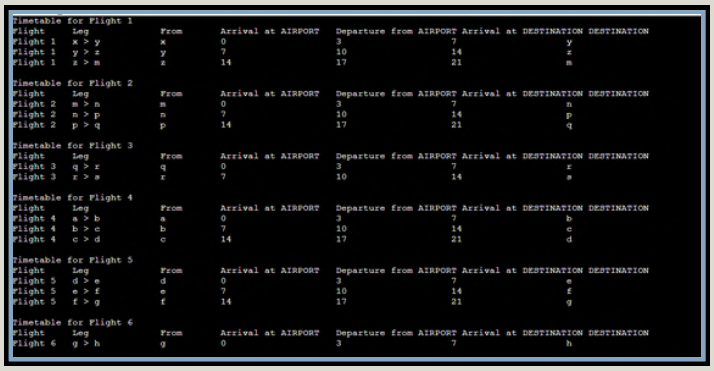
He is pleased to share the progress of a recent project—a sophisticated Astrology GPT developed utilizing the advanced features of GPT-4. Focused training on Vedic astrology literature has enabled the tool to adeptly interpret birth charts with impressive accuracy, a validation we've sought through comparisons with professional astrologers. This project marks a significant stride in merging artificial intelligence with ancient wisdom, providing users with nuanced astrological insights.

Looking ahead, the roadmap includes integrating Ayurveda principles for health analysis, introducing Varshaphal for yearly predictions, and enhancing capabilities with Navamsa chart readings. The aim is to deliver a practical and reliable tool that harmonizes modern technology with the rich tapestry of astrological knowledge.

Sahil Chandna

DATE: 7 JUL. 2023 -24 AUG. 2023

Topic : Flight Route Optimization



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Timetable for Flight 1
Flight    Leg       From    Arrival at AIRPORT   Departure from AIRPORT Arrival at DESTINATION DESTINATION
Flight 1  x > y     x       0                    3                      7                      y
Flight 1  y > z     y       7                    10                     14                     z
Flight 1  z > m     z       14                   17                     21                     m

Timetable for Flight 2
Flight    Leg       From    Arrival at AIRPORT   Departure from AIRPORT Arrival at DESTINATION DESTINATION
Flight 2  m > n     m       0                    3                      7                      n
Flight 2  n > p     n       7                    10                     14                     p
Flight 2  p > q     p       14                   17                     21                     q

Timetable for Flight 3
Flight    Leg       From    Arrival at AIRPORT   Departure from AIRPORT Arrival at DESTINATION DESTINATION
Flight 3  q > r     q       0                    3                      7                      r
Flight 3  r > s     r       7                    10                     14                     s

Timetable for Flight 4
Flight    Leg       From    Arrival at AIRPORT   Departure from AIRPORT Arrival at DESTINATION DESTINATION
Flight 4  a > b     a       0                    3                      7                      b
Flight 4  b > c     b       7                    10                     14                     c
Flight 4  c > d     c       14                   17                     21                     d

Timetable for Flight 5
Flight    Leg       From    Arrival at AIRPORT   Departure from AIRPORT Arrival at DESTINATION DESTINATION
Flight 5  d > e     d       0                    3                      7                      e
Flight 5  e > f     e       7                    10                     14                     f
Flight 5  f > g     f       14                   17                     21                     g

Timetable for Flight 6
Flight    Leg       From    Arrival at AIRPORT   Departure from AIRPORT Arrival at DESTINATION DESTINATION
Flight 6  g > h     g       0                    3                      7                      h
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He has developed a comprehensive program focused on the efficient management and optimization of routes for a fleet of planes. The program takes into consideration key data, including the number of available planes, specified routes, and the time required for each route. The main objective is to determine the most optimal route for each plane, accounting for factors such as time constraints and optimal resource utilization.

Going beyond route optimization, the program also generates schedules that strategically organize the activities of the planes, with the goal of maximizing efficiency and minimizing downtime. Through a combination of algorithmic optimization and advanced scheduling techniques, the project serves as a valuable tool for enhancing the overall performance and operational efficiency of a fleet of planes.

UNLOCKING ATHLETIC POTENTIAL : THE POWER OF BIOMECHANICAL ANALYSIS IN SPORTS PERFORMANCE

--MEGH BHOSEKAR

Biomechanical analysis, the scientific study of the mechanics of living organisms, has emerged as a game-changer in the world of sports performance. This article explores the profound impact of biomechanical analysis on enhancing athletic capabilities, refining techniques, preventing injuries, and ultimately pushing the boundaries of what the human body can achieve in various sports.

Biomechanical analysis has come a long way from its humble beginnings, evolving into a sophisticated field with cutting-edge technologies. From basic motion capture systems to advanced wearable sensors and real-time data analytics, the tools at our disposal allow for a granular understanding of the intricate movements that define sports performance.One of the primary contributions of biomechanical analysis is its ability to provide precise measurements of athletic movements. Motion capture systems, equipped with high-speed cameras

and markers strategically placed on athletes, enable researchers and coaches to dissect every aspect of a movement whether it's a sprinter'stride, a swimmer's stroke, or a golfer's swing. Biomechanical analysis serves as a coach's keen eye, offering insights into an athlete's form and technique.

By breaking down movements into individual components, coaches can identify inefficiencies and areas for improvement. This level of detail allows for targeted training regimens, helping athletes refine their skills and optimize their performance.Understanding the biomechanics of sports not only aids in performance enhancement but also plays a crucial role in injury prevention. By analyzing an athlete's movements, researchers can identify potential stress points and injury risks. This information is invaluable for developing tailored training programs and rehabilitation strategies, ensuring athletes stay on the field and in peak condition.Biomechanical analysis is a powerful tool in skill acquisition.

Coaches can use detailed movement data to provide athletes with targeted feedback, expediting the learning process. Whether it's perfecting a gymnast's routine or refining a basketball player's shooting technique, biomechanical insights contribute to accelerated skill development.The synergy of biomechanical analysis with other technological advancements, such as artificial intelligence and virtual reality, opens new frontiers in sports performance. AI algorithms can process vast amounts of biomechanical data to identify patterns and trends, while virtual reality allows athletes to immerse themselves in simulated environments to perfect their skills.While biomechanical analysis has revolutionized sports science, challenges persist. Ethical considerations, the need for standardized protocols, and the accessibility of technology are among the issues that researchers and practitioners continue to address. Looking ahead, the future promises even more sophisticated technologies and a deeper understanding of the biomechanics of elite performance.

Team Kaizen Interviews

Interviews are open for all departments and schools. Please keep an eye out for the official email and social media updates from the team (**@teamkaizenindia OR Scan the QR Code**) for more information. We encourage all students to take advantage of this opportunity and apply for interviews.

Tentative Dates : Last week of January 2024

We wish you all the best for your interviews!