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VADODARA HACKATHON 4.0

“NO **PROBLEM** IS TOO BIG... NO **IDEA** IS TOO SMALL”

12TH TO 13TH SEPTEMBER 2023

Organized by

Parul Innovation & Entrepreneurship Research Centre

www.edc.paruluniversity.ac.in

About PIERC

Parul Innovation and Entrepreneurship Research Centre (PIERC) is a Section 8 company established in 2015 by Parul University as an incubator to provide comprehensive support and services to startups at every stage of their journey, from the idea stage to growth. PIERC operates under the Entrepreneurship Development Centre (EDC), which was founded in 2013 with the goal of fostering a culture of research, innovation, and entrepreneurship among students and faculties. The Vadodara Startup Studio, an initiative of the Entrepreneurship Development Centre, was launched in 2021. It serves as a dynamic startup incubator and accelerator, facilitating the transformation of aspiring entrepreneurs' visions into scalable startup ventures. The studio offers a range of resources, including pre-seed grant support through VC funding, government grants, and other funding opportunities. Additionally, PIERC houses a Fabrication Laboratory (Fab Lab), a state-of-the-art technical prototyping platform designed to foster learning and innovation. Equipped with advanced technology such as 3D printers, laser cutters, CNC routers, and vinyl cutters, the Fab Lab empowers students to bring their ideas to life. Recently in 2023 PIERC has expand his horizon within state by launching its 3 new units namely Rajkot Startup Studio, Ahmedabad Startup Studio and Surat Startup Studio with the aim to reach more entrepreneurs and supporting their ground breaking startups.

PIERC serves as a dedicated hub for nurturing entrepreneurial spirit, providing incubation support, and fostering innovation and research among the aspirant entrepreneurs and startups. The inclusion of the Vadodara Startup Studio, Rajkot Startup Studio, Ahmedabad Startup Studio and Surat Startup Studio and the Fab Lab further strengthens the ecosystem, offering resources, funding opportunities, and a collaborative environment for aspiring entrepreneurs and innovators.

About Event

The Vadodara Hackathon 4.0, organized by the Parul Innovation and Entrepreneurship Research Center, is a premier tech event that aims to foster innovation, collaboration, and creative problem-solving in Vadodara, Gujarat. This hackathon serves as a platform for tech enthusiasts, students, and professionals to come together and address real-world challenges using cutting-edge technology. Here's a brief overview of its objectives and potential outcomes:

Objectives:

- **Promote Innovation:** The primary objective is to promote innovation by challenging participants to develop creative and novel solutions to real-world problems. This encourages out-of-the-box thinking and the application of emerging technologies.
- **Collaboration:** The hackathon fosters collaboration among participants from diverse backgrounds, including programmers, designers, and entrepreneurs. It encourages cross-disciplinary teamwork to tackle complex challenges.
- **Skill Development:** Participants have the opportunity to enhance their technical skills, problem-solving abilities, and project management capabilities. The hackathon serves as a valuable learning experience.
- **Entrepreneurship:** It nurtures an entrepreneurial mindset by encouraging participants to develop solutions that have market potential. Winning teams may have the opportunity to further develop and commercialize their solutions.
- **Community Engagement:** Vadodara Hackathon 4.0 actively engages with the local community, inviting them to witness the innovation and creativity of participants. This helps in bridging the gap between technology and society.

Potential Outcomes:

- **Innovative Solutions:** The hackathon is expected to yield innovative solutions to real challenges faced by Vadodara and the broader community. These solutions can have practical applications and bring about positive change.
- **Networking:** Participants have the chance to network with fellow tech enthusiasts, mentors, and industry professionals. This can lead to future collaborations, partnerships, and career opportunities.
- **Startup Initiatives:** Some winning teams may choose to turn their hackathon projects into startup ventures, contributing to the local entrepreneurial ecosystem and potentially creating job opportunities.
- **Skill Enhancement:** Participants leave the event with improved technical and soft skills, making them more competitive in the job market and better equipped to tackle future challenges.

- **Community Impact:** The solutions developed during the hackathon can have a direct impact on the Vadodara community by addressing pressing issues in fields such as healthcare, education, infrastructure, and more.

Overall, Vadodara Hackathon 4.0, organized by the Parul Innovation and Entrepreneurship Research Center, serves as a catalyst for innovation, learning, and collaboration in Vadodara. It not only benefits the participants but also contributes to the local ecosystem by providing practical solutions to real problems.

- **Igniting Innovation, Shaping the Future. Join us in solving real-world challenges through technology and creativity.**
- **Registration link closes on 5th September, 2023**
- **Institute wise Mentoring and selection round: 6th to 9th September 2023.**
- **Grand Finale & Jury Evaluation 12th & 13th September 2023, 9:00 am to 5:00 pm**

Eligibility for College/ University Students:

Participation in the event is limited to teams consisting of six members. Additionally, the students are welcome from all the Colleges/ University pan Gujarat to participate.

Venue:

Grand Finale will be held at Parul University, Vadodara, Gujarat

Important Dates

Sr. No.	Timeline	Date
1.	Last Date of Registration	5th September 2023
2.	Institute wise Mentoring and selection round	6th to 9th September 2023
3.	Institute wise Announcement of Selected Teams	10th September 2023
4.	Grand Finale & Jury Evaluation	12 th & 13 th September 2023

Please Note: Timings for Grand Finale will be 9:00 am to 5:00 pm

Assessment criteria for the Vadodara Hackathon 2023:

1. Innovation and Creativity
2. Technical Excellence
3. Impact and Effectiveness
4. Scalability and Sustainability
5. User Experience
6. Integration and Compatibility
7. Security and Privacy
8. Presentation and Documentation
9. Teamwork and Collaboration
10. Feasibility and Viability

Rewards:

1. Winners will be felicitated.
2. Incubation & Funding support to scale up the idea
3. Support to file IP for selected Projects
4. Business Development Assistance
5. Market Access
6. Mentoring and Guidance
- 7.

Problem statements Hardware Category:

1. **Automatic regulation of valves for release of water based upon soil moisture availability in the root zone of the crop, using artificial intelligence, in a piped and micro irrigation network of irrigation system.**

Description:

In modern agricultural practices, efficient water management plays a critical role in achieving optimal crop yields, conserving water resources, and maintaining ecological balance. However, existing irrigation systems often lack the precision required to deliver water tailored to the actual needs of crops, leading to water wastage, suboptimal plant growth, and environmental degradation. This problem is particularly pronounced in piped and micro irrigation networks, where traditional methods of manual control fail to adapt dynamically to varying soil moisture conditions within the root zone of crops. The core issue lies in the absence of an automated mechanism that can regulate the release of water based on real-time soil moisture availability. The inconsistency in water distribution and the inability to synchronize irrigation with crop water requirements result in detrimental outcomes for both the agricultural yield and water conservation efforts. To address this problem, there is a compelling need for an innovative solution that leverages artificial intelligence (AI) to enable the automatic regulation of valves for water