PVP Siddhartha Institute of Technology
Department of Information Technology
8-Hours Hackathon – Java Fullstack

Problem Statement 1: Create a Virtual Herbal Garden that provides an interactive, educational, and immersive experience to users, showcasing the diverse range of medicinal plants used in AYUSH (Ayurveda, Yoga & Naturopathy, Unani, Siddha, and Homeopathy).

Description: Participants are tasked with developing a Virtual Herbal Garden that is engaging, informative, and user-friendly. This virtual garden should include:
Interactive 3D Models: Realistic 3D models of medicinal plants that users can rotate, zoom, and explore from different angles.
Detailed Information: Comprehensive details about each plant, including its botanical name, common names, habitat, medicinal uses, and methods of cultivation.
Multimedia Integration: High-quality images, videos, and audio descriptions to enhance the learning experience.
Search and Filter Options: Advanced search functionality to easily locate specific plants and filter them based on various criteria like medicinal uses, region, and type.
Virtual Tours: Guided virtual tours highlighting specific themes, such as plants for digestive health, immunity, skin care, etc.
User Interaction: Features that allow users to bookmark favourite plants, take notes, and share information on social media.

Expected Solution: The expected outcome is a comprehensive Virtual Herbal Garden that serves as a valuable educational tool for students, practitioners, and enthusiasts of the AYUSH sector. This platform should make the knowledge of medicinal plants accessible to a wider audience, promoting awareness and understanding of traditional herbal practices. It should be visually appealing, informative, and interactive, providing users with an immersive experience that combines technology with traditional knowledge.

Problem Statement 2: Enhancing Monitoring and Management of Research, IPR, Innovation, and Start-ups

Description: The proposed comprehensive web application aims to address the key challenges faced in monitoring and managing research, IPR, innovation, and start-ups in Gujarat. The application will serve as a centralized platform to integrate various functions and provide seamless access to information and resources. The key features of the web application include:

Unified Data Repository: A centralized database where all research projects, innovations and start-up information are stored and easily accessible.
Transparent Monitoring: Tools for stakeholders to track the progress and outcomes of research projects, innovation developments, and start-up growth, ensuring greater transparency.
Support for Innovators and Start-ups: Access to resources, mentorship, and support services for innovators and entrepreneurs, facilitating their growth and success.
Data-Driven Insights: Analytics and reporting tools to provide data-driven insights for policy makers and funding agencies to make informed decisions. The application will cater to various users, including researchers, innovators, entrepreneurs, policy makers, investors. By integrating all these functions into a single platform, the application will address the inefficiencies and fragmentation currently hindering the growth and success of research and innovation.
Researchers and Academics: Require a platform to manage and track their research projects, collaborations and funding.
Innovators and Entrepreneurs: Need a centralized system to access resources, support, and information related to their innovations and start-ups Policy Makers and Government Bodies: Require data-driven insights to make informed decisions on resource allocation and policy formulation.
Investors: Need a transparent system to evaluate and support promising research projects and start-ups.

Expected Solution: The implementation of this comprehensive web application is expected to yield significant positive outcomes:
Centralized Data Repository: Establishment of a unified platform where all relevant data is stored, reducing fragmentation and improving data accessibility.
Increased Transparency: Enhanced transparency in tracking progress and outcomes of various projects, facilitating better oversight and accountability.
Accelerated Innovation: Faster and more efficient innovation processes due to improved support systems and collaboration opportunities.
Economic Growth: Increased start-up success rates and innovation outputs, contributing to the overall economic growth of Andhra state.
In summary, the proposed web application aims to create a more efficient, transparent, and supportive environment for research, innovation, and start-up growth in Andhra. By addressing the current challenges and leveraging modern technology, the application will significantly enhance the state's capacity to foster and sustain innovation and entrepreneurship.

Problem Statement 3: Automated System for Career Advancements of the Faculties of Higher Education

Description: This problem requires an innovative approach to enhance the efficiency and transparency of faculty self-appraisal in the university settings. Through a robust web-based platform, the system should address the complexities associated with traditional evaluation processes. It should capture and manages intricate details of faculty activities, encompassing research publications, event participation, seminars, projects, and lectures. The project must aim to create a user-friendly environment for faculty members, optimizing the self-appraisal experience. Employing a secure registration and login system ensures data confidentiality and personalized access and providing a consolidated record for administrators.

Expected Solution: This comprehensive solution should aligns with the objectives of modernizing appraisal methodologies, fostering a culture of continuous improvement, and supporting Paperless India motive. Administrators, on the other hand, can leverage this data to make informed decisions about faculty development and resource allocation. Employees/faculty can then download the form submission details in a PDF format.

Problem Statement 4: Freelancing Platform

Description/Expected Solution: 1. Freelance Job Marketplace: Develop a marketplace where freelancers can find short-term jobs, gig work, and project-based opportunities. Allow employers to post projects, specify requirements, and invite freelancers to apply.
2. Freelancer Profile and Portfolio Management: Enable freelancers to create detailed profiles showcasing their skills, experiences, and portfolio of past work. Integrate a rating and review system for feedback on completed projects.
3. Extensive Search & Analytics Enable Employers/Freelancers to do extensive search in the available data / generated data. Generation of AI enabled insights into the Data and providing newer ways of information availability for job seekers / employers to engage. AI based Recommendation Systems for seeking opportunities.

Problem Statement 5: Intelligent platform to Interconnect Alumni and Student.

Description/Expected Solution:
Create an Alumni Database: Develop a centralized database to store and update information on alumni, including their employment status, contact details, educational and professional achievements, and areas of expertise.

Build an Engagement Platform: Design and implement an online platform for alumni and students to connect, interact, and collaborate.

This platform should support:

Discussion forums, Mentorship programs, Career guidance sessions, Placement assistance, Academic support,

Conduct Interaction Sessions: Organize regular interaction events, such as: Alumni meet ups, Online webinars, Panel discussions. These sessions will provide students with opportunities to learn from alumni, seek advice, and expand their professional networks. Further, the platform shall detect and prevent fake profiles or fraudulent activities on the platform using blockchain or any authenticated technique. It shall detect and filter inappropriate or harmful content in forums, comments, and user profiles. It may integrate AI-driven chatbots to answer common questions, provide guidance, and assist students with navigating the website.

Problem Statement 6: Determining expert relevance with respect to interview board subject and candidates area of expertise.

Description: Recruitment and Assessment Centre (RAC), conducts interview for recommending candidates under recruitment, assessment and for sponsorship to acquire higher qualification. The process of conducting an interview comprises of selection of board members i.e. experts from industry, academia, etc. It is a challenge to manually match profile of subject experts w.r.t. interview board subject and candidates area of expertise.

Expected Solution: The solution shall be able to provide a matching score for experts whose domain matches w.r.t. interview board subject and candidates area of expertise and thereafter should be able to predict suitability of expert for a particular interview board through a relevancy score. To arrive on the relevancy score for an expert the system should be able to determine a profile score for each selected expert w.r.t. profile of candidates to be interviewed.