GDSC DJSCE ✕ **SYNAPSE**

HACKNICHE

A 24 HR HACKATHON

PROBLEM STATEMENTS

PS 1 – Hackathon Team Selection

Selecting the right teams is crucial for the success of a hackathon. However, the current process of shortlisting teams is often manual, time-consuming, and prone to human error. Moreover, the lack of a standardized evaluation process can lead to inconsistent results and a lack of transparency. The goal of this hackathon is to develop innovative solutions that streamline the process of shortlisting teams for hackathons.

Features :

1. Evaluation Criteria: A standardized evaluation process that ensures consistency and transparency in the shortlisting process.
2. Team Selection: An algorithm that helps select the most suitable teams based on their skills, experience, and qualifications.
3. Communication: A platform that facilitates communication between the hackathon organizers and the shortlisted teams, including updates, reminders, video conferencing, and feedback.
4. Reporting and Analytics: A platform that provides real-time reporting and analytics on the shortlisting process, including metrics such as application volume, team selection, and evaluation criteria.

PS 2 – Personal finance management system

Automating the process of financial planning and investment management using AI-powered wealth management systems. The platform should provide features like budgeting, expense tracking, investment portfolio management, and financial goal setting.

Features :

1. The solution can involve different saving strategies for different types of users based on features like income, living expenses, etc. Dataset
2. You may involve different government investment schemes like Public Provident Funds, Government Securities, Sovereign Gold Bonds, National Savings Certificate, National Pension Schemes, and Post Office Monthly Income Schemes.
3. Suitable insurance plans may be considered for proper insurance coverage.
4. Stock suggestions on the basis of the current portfolio and its potential growth may earn brownie points. Dataset
5. Your solution may involve emergency funds, dream funds, retirement planning, and easy liquidity of assets for a complete solution.

PS 3 - Easing the lives of servicemen

The backbone of the nation is its military. They give their lives up willingly to protect the country. However, they continue to have issues in their career, social, and private lives. As citizens, we must make every effort to make their lives easier both during and after their term. It is a moral obligation of ours.

The goal of this problem statement is to provide a platform that will help national soldiers and their families live better lives in some way.

Features :

- Enhancing employment opportunities: Taking into mind the significant relocation challenges, this platform should offer opportunities for separating or retiring service members to earn civilian work experience and assist a seamless transfer into the civilian economy.

- Family support: The platform can offer assistance to the families of soldiers who have been deployed or killed in action. Resources like counseling, financial aid, care for war widows, and childcare services might all be part of the solution.

- Pension Management: The platform focuses on describing retirement benefits for military personnel. Streamlining the estimation and transfer of post-retirement pensions, which are based on a number of factors such as rank, length of service, retirement date, etc.

- The government and other organizations also offer defense personnel a number of retirement benefits. A trustworthy community-driven list of seasoned resources and schemes should be made available on the platform.

- A portal that connects veteran mentors and veteran mentees seeking expert mentoring. Mentors with expertise should be able to discuss their personal journeys as blogs.

Note:

Soldiers keep away from technologies for the most part of their lives. Make sure the platform has an intuitive user interface.

PS 4 – Online Verification of Certificates using Blockchain

Lakhs of people are getting degrees year after year. Due to the lack of effective anti-forge mechanisms, events that cause the graduation certificate to be forged often do not get noticed. In order to solve the problem of counterfeiting certificates, the digital certificate system should be based on blockchain technology.

Features :

1. Users can apply for an e-certificate to the particular institution/organization.
2. The institution/organization should verify the application by accepting/rejecting the application.
3. The approved certificate's serial number should be recorded and stored on the blockchain.
4. Upon approval of the certificate, the user should receive a serial number and QR code.
5. So, if the user submits the serial number/QR code to any organization, the organization can then verify whether the certificate is valid or not.
6. If a user submits a certificate containing serial number or QR code, the organization can report that particular user.

Note:
You can refer to this link celo-composer for app and web.
Brownie points for deploying the smart contract on Celo Blockchain network.

PS 5 – Automated News Fetcher

Create an automated server that fetches News every day. (You can use any of the free apis like <u>newsdata</u>). The news is fetched and stored on the server. Create a UI (Can be a basic app, web, or any other basic UI) that fetches these news stored on the server.

Features :

1. News to be fetched, stored, and served only on the Server.
2. You should use cloud services like Google Cloud, AWS, or similar to host the server you created.
3. Personalized News can be stored. On UI you can make users select genres and based on that you can recommend personalized news.
4. You can use features like FCM or AWS SES to notify users.

Note :
You can use serverless architecture (like AWS lambdas or Google Cloud Functions or similar) to fetch news and store the news. And Services like API Gateway to serve the news.

PS 6 – Intrusion / Theft Detection system

An intrusion/theft detection system using IoT and AI involves the use of various sensors and devices to detect and alert for possible unauthorized entry or theft in a given area or property. Using IoT and AI can provide a high level of security and peace of mind for property owners and managers, by leveraging the power of advanced technology to detect and prevent threats before they become serious.

Features :

1. The system should be able to raise an alarm/alert in case of an intrusion.
2. The system should be able to gather data from various sensors/devices such as cameras, motion sensors, etc.
3. Use ML-based detection to reduce the number of false positive alarms/thefts.
4. Make use of a dashboard for real-time monitoring of their premises
5. Implement a way to alert authorities in time.