HackVyuha 2025 - 1.0 Shri BM Patil Foundation

AI-Driven Decentralized Financial Risk Engine with Immersive Visualization"

Problem Statement 11

The growth of Decentralized Finance (DeFi) has unlocked access to financial services beyond borders. However, users—especially institutional investors and high-risk retail traders—face challenges in risk visibility, credit exposure, and smart contract security.

Your challenge is to build a next-gen AI-powered Risk Advisory Platform that allows users to:

Core Features:

1. Real-Time Risk Assessment for DeFi Portfolios

Pull data from blockchain networks (e.g., Ethereum, Polygon) using APIs (Moralis, Alchemy, or Chainlink).

Use AI/ML to analyze wallet risk exposure, token volatility, and smart contract vulnerabilities.

Provide predictive risk scoring (VAR, Sharpe Ratio) using market history and news sentiment.

2. Web3 + Open Banking Integration

Enable linking of both traditional bank accounts (using Open Banking APIs like Fynapse, Yodlee, or Salt Edge) and DeFi wallets (MetaMask, WalletConnect).

Create a hybrid risk profile for users spanning fiat and crypto assets.

3. Interactive XR Dashboard (AR/VR/XR)

Visualize user portfolios and risk zones using immersive dashboards.

Example: Use Unity or Three.js for 3D portfolio heatmaps or XR-based smart contract flow visualization.

4. Zero-Knowledge Proof (ZKP) for Privacy-Preserving Credit Scoring

Use ZK-SNARKs to share proof of credibility without exposing sensitive financial data.

Bonus Challenges (Optional):

Build a voice-activated AI financial assistant for immersive experiences.

Integrate generative AI (like GPT) to simulate “what-if” scenarios for market crashes.

Implement compliance rules using smart contracts (MiCA / FATF guidelines).

Tokenize digital identity or credit scores as NFTs for cross-platform lending.