



THE BEAST AT  
THE BACK

# Prototype Submission

Team Lonewolf | BlockDAG Hackathon 2025



# Team Details & Theme

- ❖ Team Name: Lonewolf
- ❖ Member: MidhanRaj (Solo Participant)
- ❖ Selected Theme: On-Chain Games & Experiences

# Problem Statement

- ❖ Traditional endless runners rely on centralized leaderboards.
- ❖ These leaderboards can be reset or tampered with, creating distrust among players.
- ❖ There is a need for verifiable, immutable score tracking that ensures transparency and builds trust without relying on a single authority.

# Solution

- ❖ The Beast At The Back is a horror-themed endless runner that integrates blockchain for trustless scoring.
- ❖ After game-over, scores are submitted on-chain via MetaMask
- ❖ High scores stored on BlockDAG are immutable & transparent
- ❖ Leaderboard updates only if the score is higher
  
- ❖ **Frameworks/Tech:**
- ❖ Unity (WebGL), Solidity Smart Contract, BlockDAG, MetaMask + ethers.js, GitHub Pages
  
- ❖ **Why these?**
- ❖ Unity for deployment, BlockDAG for secure score storage, MetaMask+ethers.js for easy integration.

# Impact Metrics

- ❖ Key Impact Metrics:
  - ❖ - 0% possibility of score tampering
  - ❖ - Transparent leaderboard verifiable by all players
  - ❖ - Increased player trust & engagement
  - ❖ - Scalable to multiple games sharing the same leaderboard
  
- ❖ Measurement:
  - ❖ Compare retention & trust scores vs centralized leaderboard games.

# Assumptions & Constraints

- ❖ **Assumptions:**

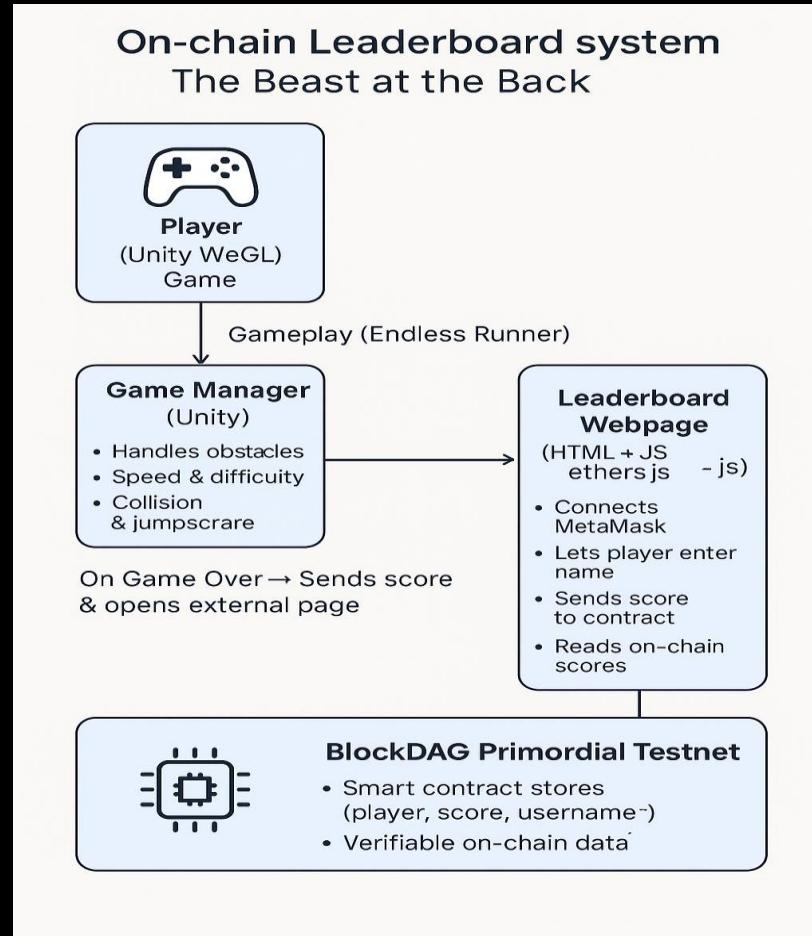
- ❖ - Players have access to a crypto wallet like MetaMask
- ❖ - Players are connected to the internet

- ❖ **Constraints:**

- ❖ - Smart contract deployment limited to BlockDAG testnet
- ❖ - Requires basic blockchain knowledge for advanced use
- ❖ - WebGL performance depends on browser support

# Architecture Diagram

- ❖ [Game Client] → [MetaMask Integration] → [Smart Contract] → [BlockDAG Storage] → [Leaderboard Page]

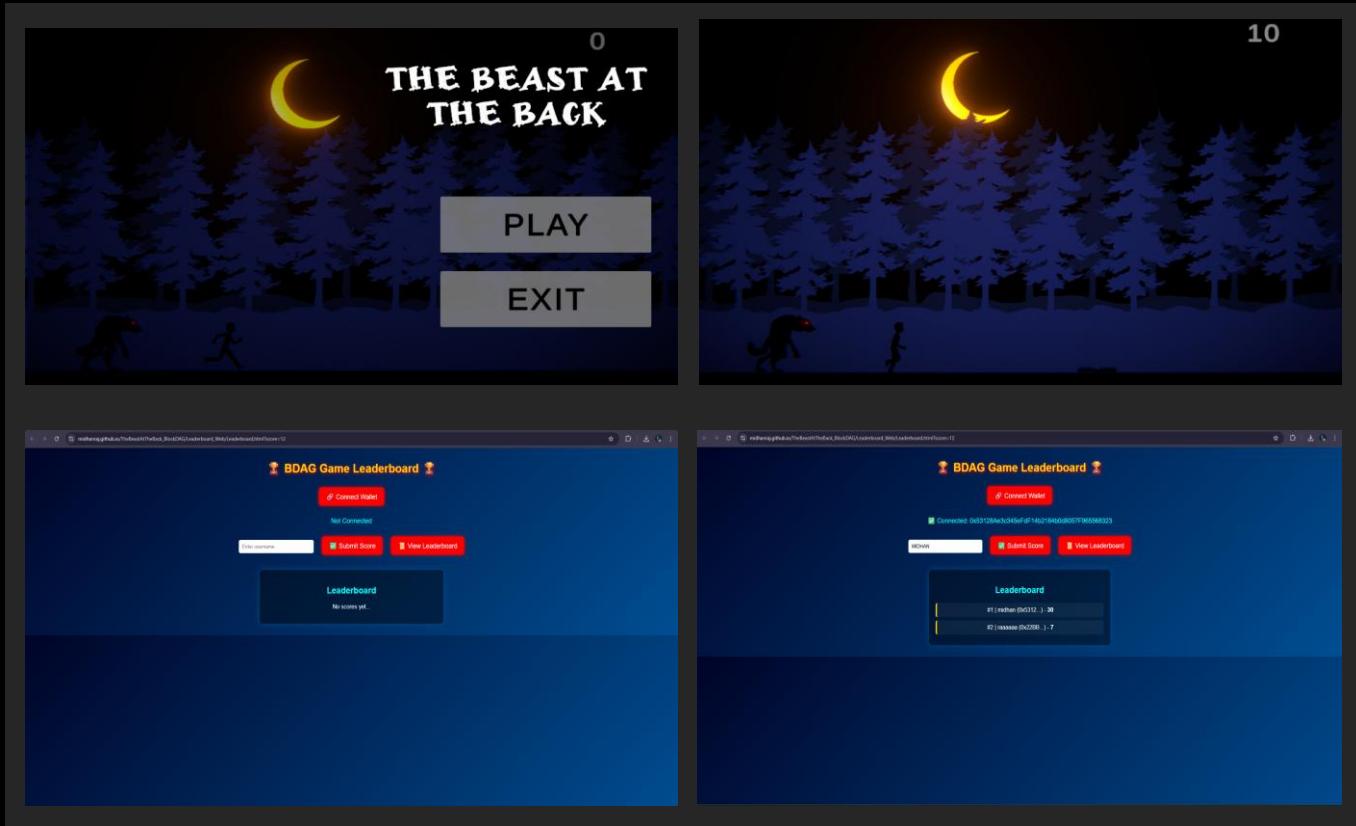


# Score Submission Flow

- ❖ Player finishes game →
- ❖ Prompt to connect MetaMask →
- ❖ Smart contract checks if new score > old →
- ❖ If higher, update on-chain leaderboard →
- ❖ Leaderboard instantly reflects new score

# Wireframes & UI Preview

- ❖ - Simple endless runner game screen
- ❖ - Leaderboard page showing wallet-linked scores



# Scalability & Future Scope

- ❖ Expand to multi-game shared leaderboards
- ❖ Introduce on-chain rewards for top players
- ❖ Scale to multiplayer blockchain-enabled games
- ❖ Create NFT-based achievements

# Working Prototype & Links

- ❖  Play: <https://midhan.itch.io/the-beast-at-the-back>
- ❖  Leaderboard:  
[https://midhanraj.github.io/TheBeastAtTheBack\\_BlockDAG/Leaderboard\\_Web/Leaderboard.html](https://midhanraj.github.io/TheBeastAtTheBack_BlockDAG/Leaderboard_Web/Leaderboard.html)
- ❖  GitHub:  
[https://github.com/MidhanRaj/TheBeastAtTheBack\\_BlockDAG](https://github.com/MidhanRaj/TheBeastAtTheBack_BlockDAG)
- ❖  YouTube Demo:  
<https://www.youtube.com/watch?v=so26lqM3IF0>