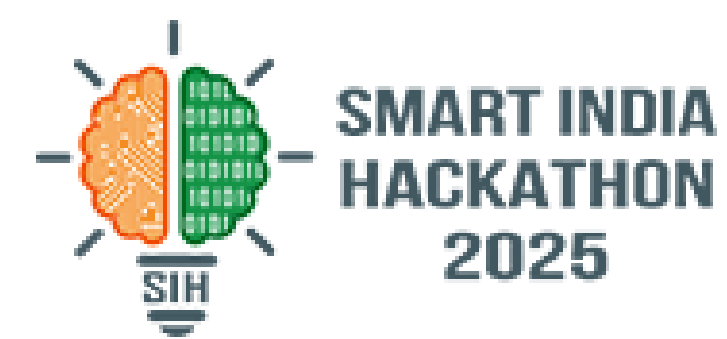


SMART INDIA HACKATHON 2025



- **Problem Statement ID –SIH25073**

- **Problem Statement Title- AI-Powered Mobile**

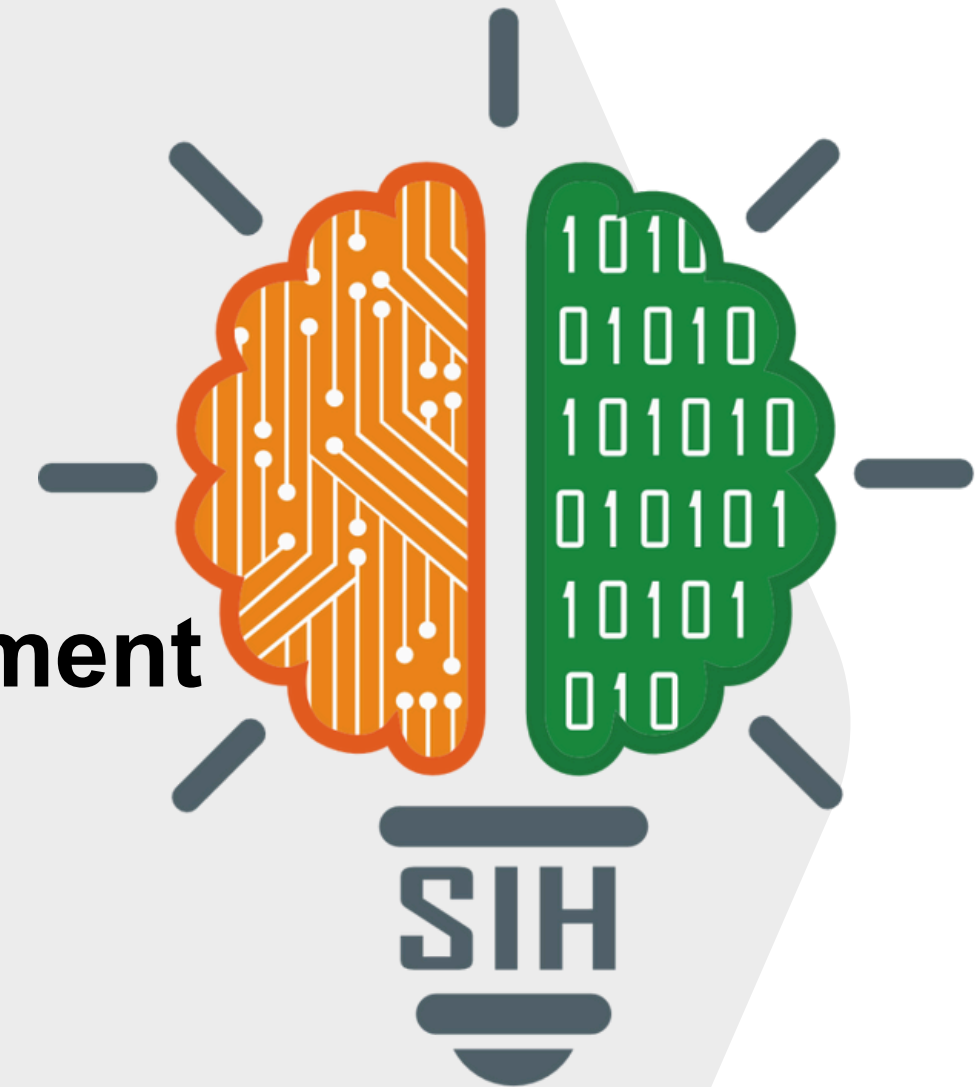
Platform for democratizing sports talent Assessment

- **Theme- Fitness and Sports**

- **PS Category- Software**

- **Team ID-**

- **Team Name- STACKMORPH**



Problem Statement

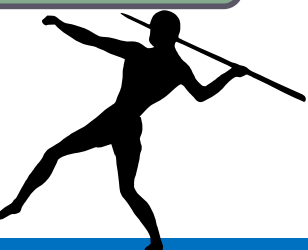
India has a lot of hidden sports talent, especially in villages. But many athletes are not discovered because there's no proper tracking system. Government and coaches don't know where talent is coming from → so resources are not used properly.

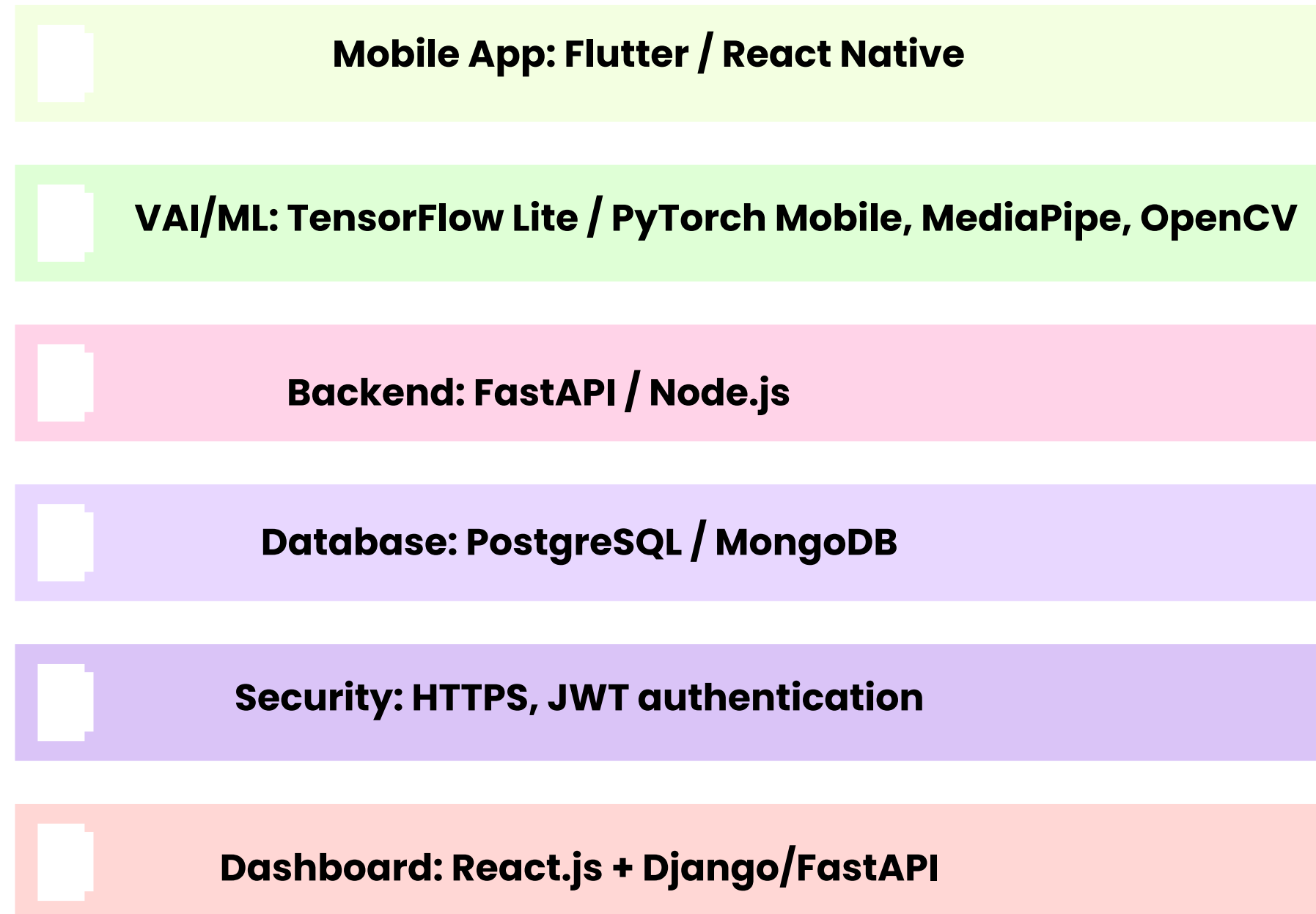
Proposed solution

- A mobile app for athletes to record and upload test performances.
- On-device AI analyzes performance (jump height, sit-ups count, run timing).
- Cheat detection ensures fairness.
- Offline mode → works without stable internet.
- Secure data upload to SAI servers.
- Dashboard for officials to view verified results.

Uniqueness and Innovation

- AI-based cheat detection
- Offline video analysis using TensorFlow Lite / PyTorch Mobile.
- Auto-test segmentation
- Gamified interface with leaderboards & badges.
- Instant benchmarking vs age/gender performance standards.





Athlete (Performance Video / Wearable Data)

Mobile App (Upload Data + Initial Processing)

AI Engine (ML + Computer Vision + Biometrics AIs)

Geo-Tagging (Location Mapping of Athlete Data)

Dashboards for Stakeholders

Feasibility of the Idea

Technology :Yes, AI, mobile apps, and maps already exist.

Cost :Yes, we can use free/open-source tools → less money needed.

Usefulness :Yes, athletes, coaches, and govt will use it.

Challenges & Risks

1. Data Problem → Some athletes may not have good internet or videos.

2. AI Mistakes → AI may misread some sports actions.

3. Privacy → Athlete data must be safe.

4. People's Mindset → Some may not trust AI and prefer old methods.

5. Infrastructure → Rural areas may lack internet.

Solutions / Strategies

1. Data Problem → Allow offline upload, set up local sports centers.

2. AI Mistakes → Train AI with Indian data, keep improving.

3. Privacy → Use secure cloud and blockchain.

4. People's Mindset → Show benefits with workshops and success stories.

5. Infrastructure → Partner withY govt programs (Digital India, Khelo India).



IMPACT:

- **Athletes** → Get recognition, even from small villages.
- **Coaches** → Can see real data, train players better.
- **Government** → Knows where to build sports centers.
- **Sponsors** → Find hidden talent to support early
- **Youth/Public** → More interest in sports, healthier lifestyles.

BENEFITS:

SOCIAL

- Everyone gets equal chance (no bias).
- Promotes sports culture across India.

ECONOMIC

- Saves scouting cost & time.
- Brings sponsorship and jobs in sports.

ENVIRONMENTAL

- Less travel needed for scouting → saves fuel.
- Smart use of resources → no wastage in building stadiums.

1. AI-Based Athlete Performance Analysis

<https://ieeexplore.ieee.org/document/10763062>

2. Mobile Platforms for Sports Analytics

<https://ieeexplore.ieee.org/document/7016249>

3. Artificial Intelligence in Talent Identification and Development in Sport

https://www.researchgate.net/publication/383673160_Artificial_Intelligence_in_Talent_Identification_and_Development_in_Sport

4. Existing Platforms / Tools

CoachAI - <https://www.coachai.com>

UPLIFT - <https://www.upliftai.com>