PropSafe
Safest Solution For Land/Real Estate Transactions

SMART INDIA HACKATHON 2019

NAME OF THE ORGANISATION : FIS SOLUTIONS(INDIA)

PROBLEM STATEMENT : Land Real Estate Registration (AK3)

PROBLEM DESCRIPTION:
Land/Real estate registration is corruption prone process which leads to lot of Benami transactions. Government tries it's best to eradicate the malpractices, but it doesn't yield fruitful result. One way to solve this problem is to use blockchain technology in order to capture all the Benami transactions related to Land/Real estate deals.

TEAM NAME : 6 of a kind

College AICTE Code : 1-3512549572

CURRENT SCENARIO

In today's world, we can often hear the problem of **'BENAMI'** transactions in India. Even after our Honourable Prime Minister has launched many schemes to eradicate it, the problem still prevails. Over 80 per cent of cases in courts are about disputes over land titles and fraud pertaining to property.

Real estate transactions are **not transparent and tampered easily**. Anyone can steal the registers or destroy them or bribe someone to tamper with records.

Necessary to digitise existing land records in India because most of land holdings have no records of ownership and makes it impossible to track all the previous owners

There is **no formal mechanism to verify land titles** which leads to illiterate people being cheated.

Minimal automated aadhaar and pan based verification during transactions.

Due to **lack of coordination between various nodal agencies handling land records**, the information registered is not standardised

People have two copies of the same registry but with different details which is illegal.

Banks and Insurers spend a **lot of time verifying land records**.

Fraud Detection Algorithms are not so credible and reliable.
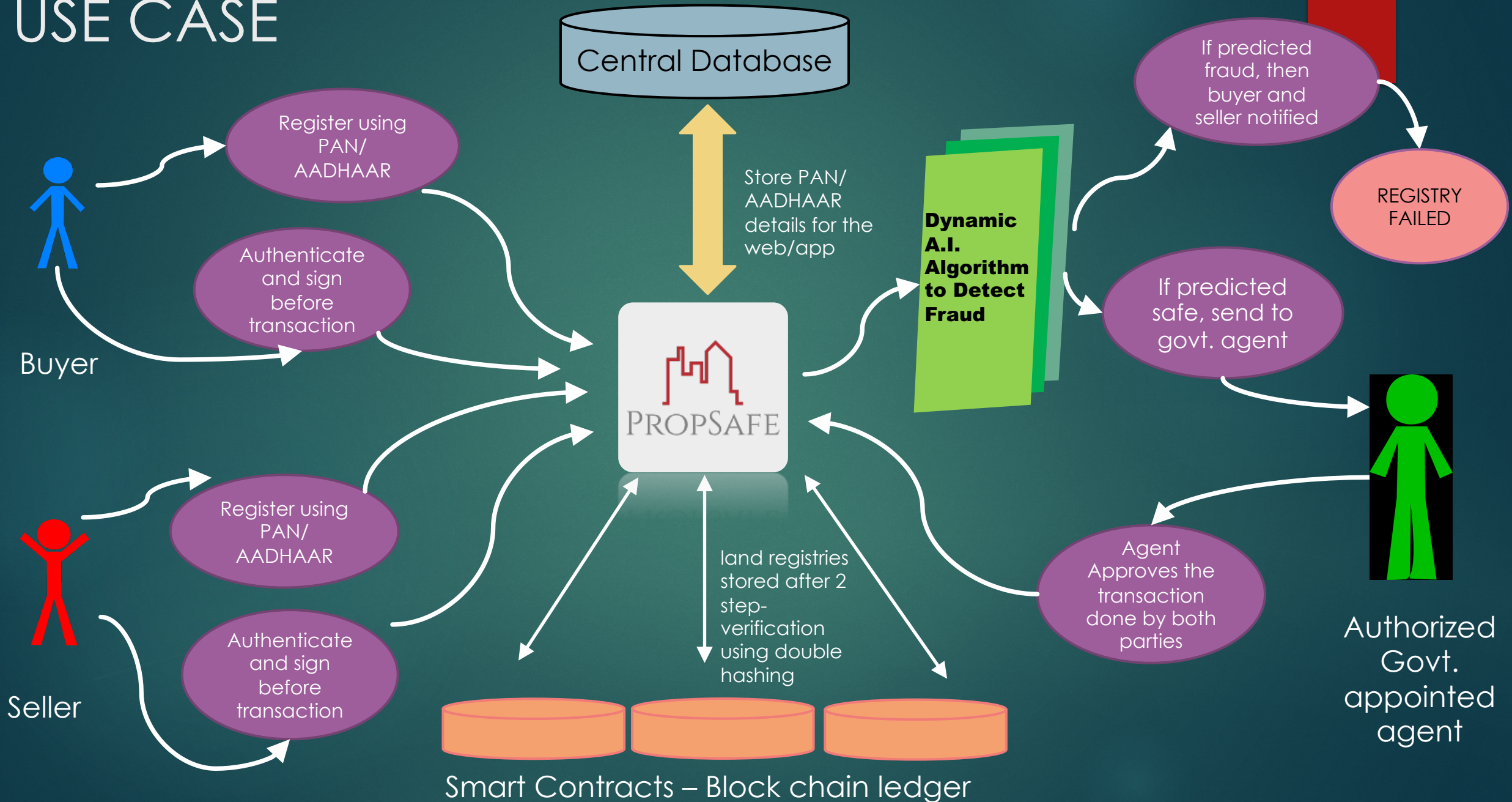
PROPOSED SOLUTION

To curb the serious problem of fraud and BENAMI land transactions and registry we propose a solution which will be the safest and one of its kind in this domain.

- A web and mobile app running on the combined concept of Blockchain and A.I (Artificial Intelligence) will be created.

- This solution will provide complete history of transactional records, so no one can ever doubt the authenticity; records are permanently linked to the system so no one can ever tamper with or forge a record of their own; and these records can be seen by any party, at any time. It is powerful and validating.

- There will be one portal for govt and one for buyer/sellers. Govt. officials will register and authenticate using their id & mobile no. Buyer/seller register though their Aadhaar and PAN card which will be verified by the government agent. Each time they login they get an OTP to registered numbers.

- All the existing land records will be digitized and moved to smart contracts. Every valid registry will be on block chain. This will be done by digital technique of hashing owner id and property id to produce a secure key. Though this there will be no duplicity or multiple records.
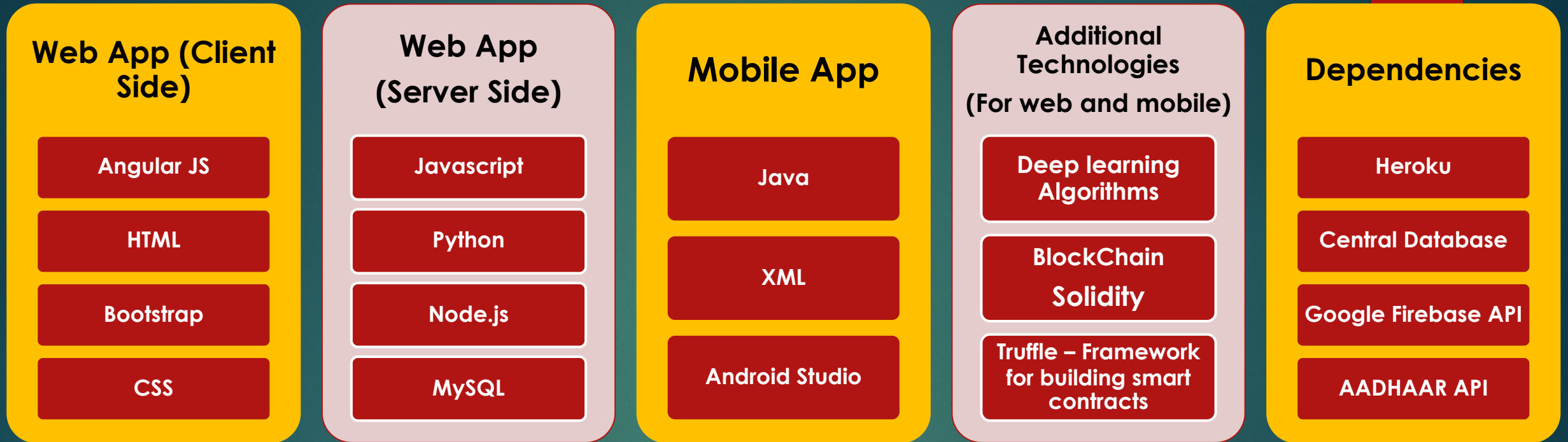
PROPOSED SOLUTION

- When a new contract comes, first buyer, seller authenticate themselves using E-signature matching. AI(Artificial Intelligence) and Machine Learning algos are used to detect the benami property and use the following techniques to detect the fraud:

  - If the property is under-valued, there might be fraud transaction (through black money)
  - If property payment is done in one go, then it might be fraud as in normal circumstances, people do not possess enough money to buy the property.
  - Payments done in cash are susceptible to fraud transactions.
  - Unoccupied Property for a long time is susceptible to being a part benami transactions.

- We impose checks of these kinds and build a dynamic algorithm which through machine learning will instantly and accurately detect any fraud cases.

- Once approved by the system, Govt. official does a 2 step authentication and once verified the records are changed in final blockchain ledger.

- If it does not pass our system the person will be notified and the transaction will fail.

- Because it's distributed, rather than copied, the danger of copies being altered and differing across the network is removed. Blockchain can track the real owner of the property and curb benami transactions through multiple identities. At all times is it first processed by AI algorithm, then passed so it is one of the safest solution of all.

TECHNOLOGY STACK

Web App (Client Side)
- Angular JS
- HTML
- Bootstrap
- CSS

Web App (Server Side)
- Javascript
- Python
- Node.js
- MySQL

Mobile App
- Java
- XML
- Android Studio

Additional Technologies (For web and mobile)
- Deep learning Algorithms
- BlockChain
  Solidity
- Truffle – Framework for building smart contracts

Dependencies
- Heroku
- Central Database
- Google Firebase API
- AADHAAR API

SHOW STOPPER

- **Deep Learning solution** (Involving detailed study of existing Govt. Schemes and Laws to eradicate such tricksters) for detection of existing fraudulent transactions of benami properties.
- **Blockchain** based solution to register and transact property online in secure manner.
- **AADHAAR (with Biometric verification) and PAN card verification** facility for credibility of buyers and sellers.
- **Dynamic Algorithm for Auto-Surveillance** of the transactions in web as well as mobile.
- **Infinite Scalability, cost effective and can handle large data transactions** at a single time.