

■ **PROBLEM STATEMENT ID :** PS 8

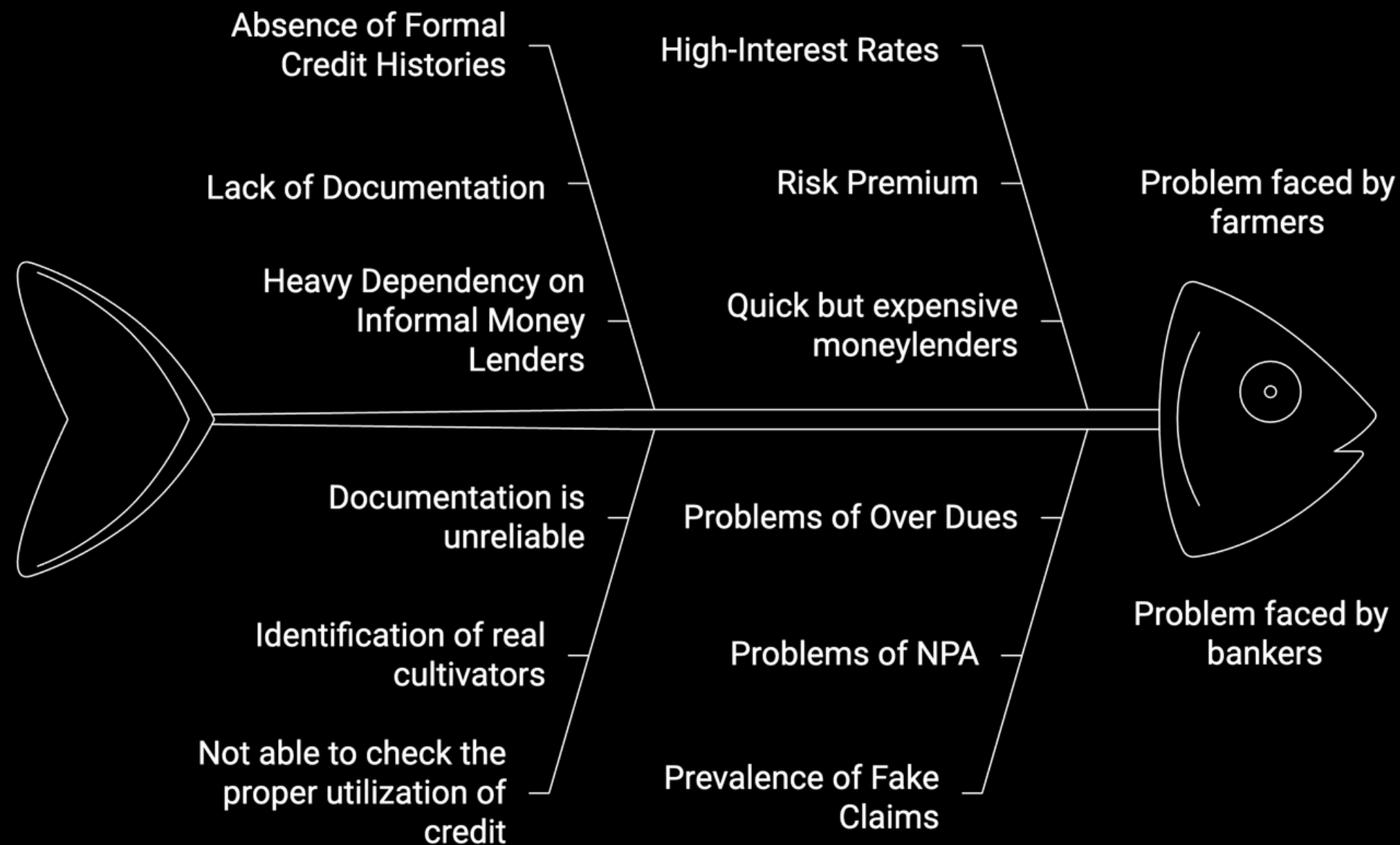
■ **TEAM NAME :** BitVerse

■ **TEAM ID :** HK 194

■ **TEAM MEMBERS :** Himanshu Ranjan, Aaryak, Yukta Chauhan,
Priyanshi Rawat

PROBLEM & SOLUTION

Problem Understanding: Farmers lack fair credit and banks misprice risk due to missing real-time agricultural data.



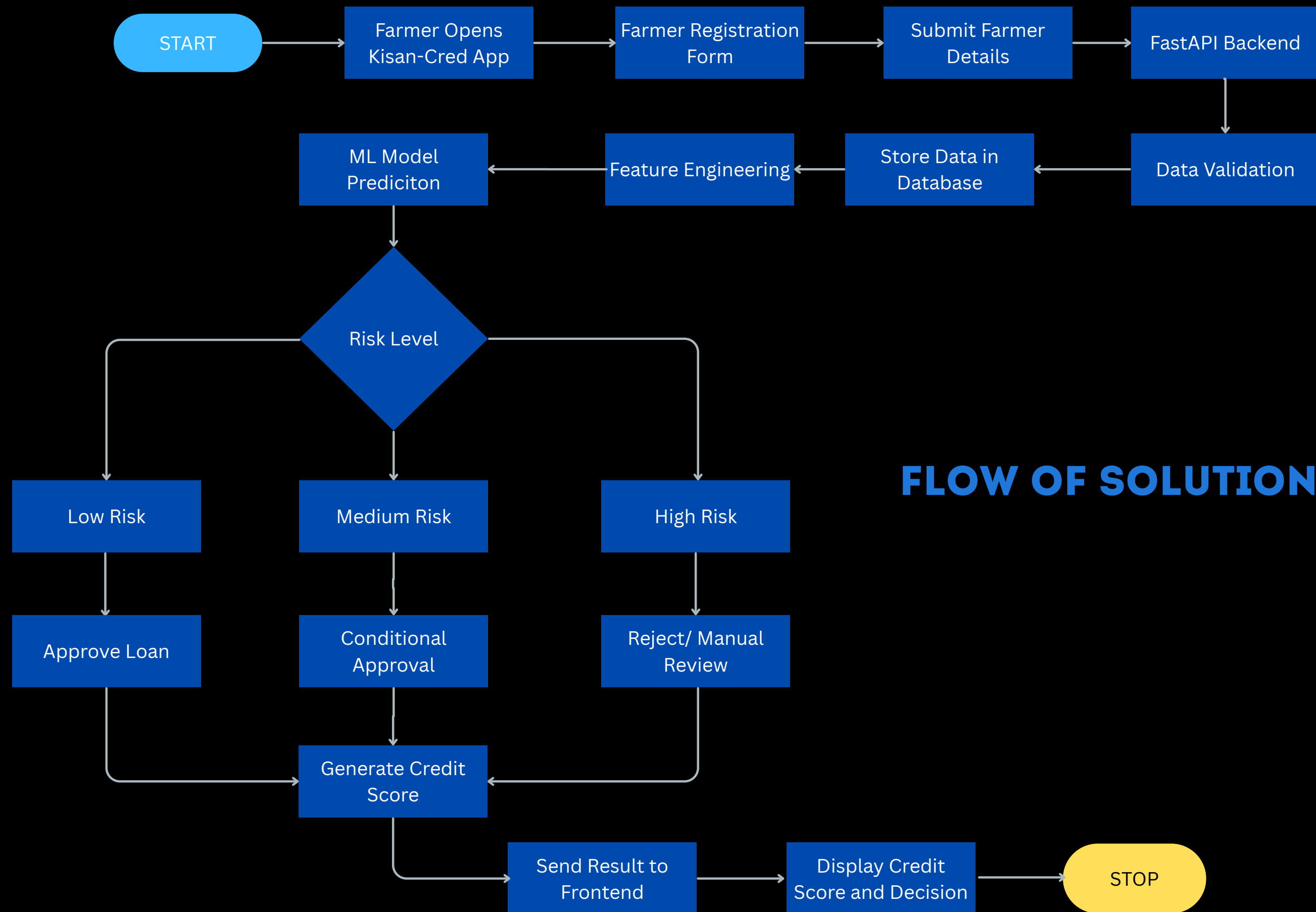
Solution: Presenting KisanCred.

How it works:

- Collects satellite data at the farm level along with crop health information.
- Integrates additional data such as weather conditions, market trends, and transaction signals.
- Uses machine learning to run dynamic risk models based on the collected data.
- Continuously updates and generates an Agri-Trust Score that reflects current risk and trustworthiness in agriculture.



HACK KRMU 5.0

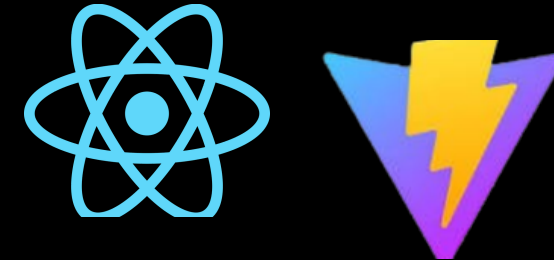


FLOW OF SOLUTION

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TECH STACKS

Frontend: React, Vite



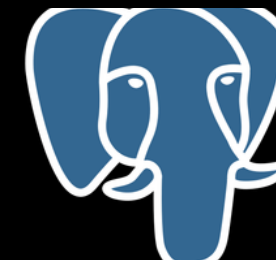
Map Engine: MapLibre GL JS



Satellite Data: Farmonaut API



Database: PostresSQL



Backend: Python FastAPI



ML-Libraries: Scikit-Learn

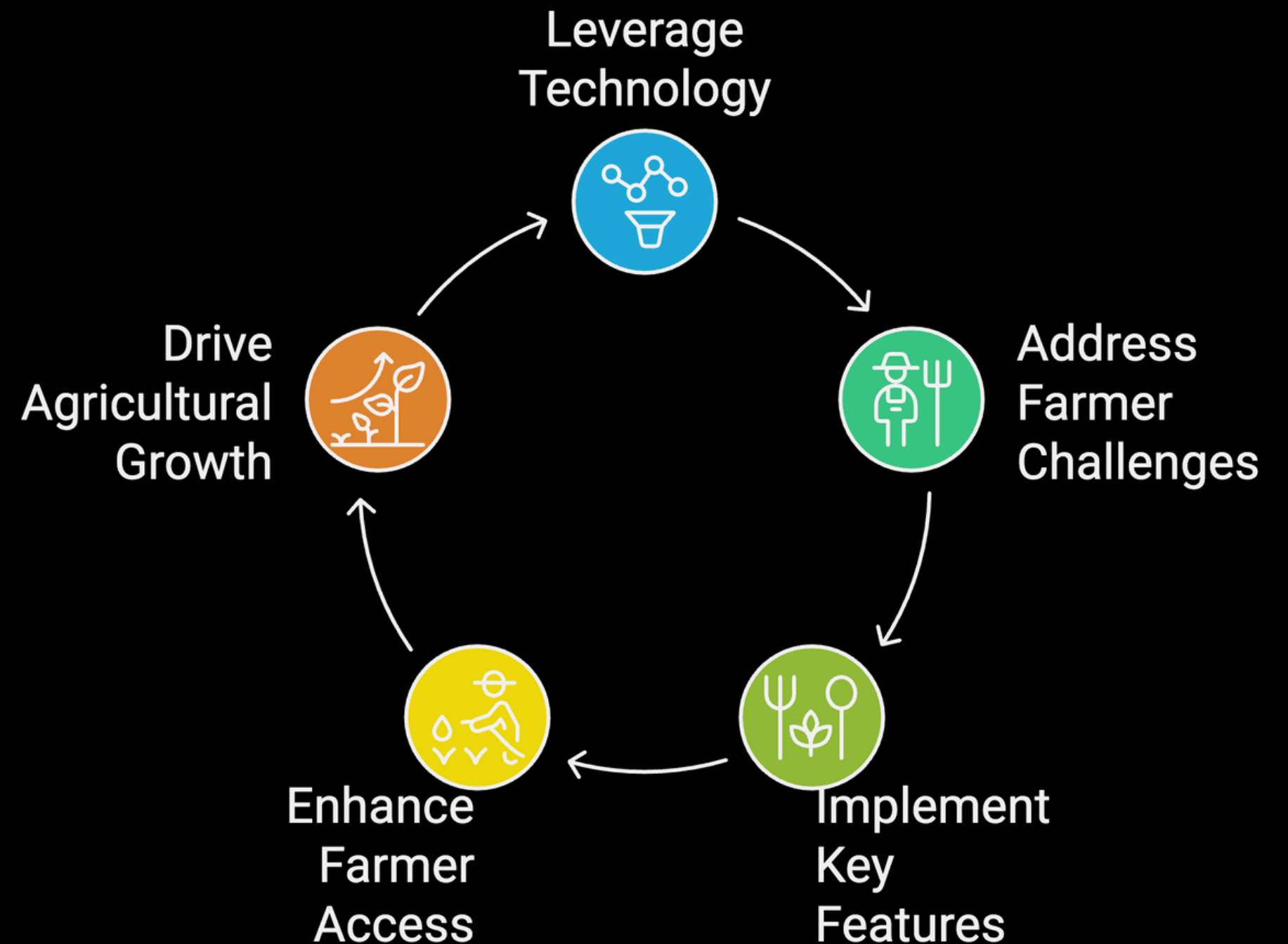


TECH STACK & APPROACH

Uniqueness of KisanCred

- Real-time Agri-Trust Score using satellite, weather, and transaction data.
- Dynamic, personalized risk-based pricing rewarding reliable farmers.
- Satellite-verified crop activity to prevent fraud.
- Transparent AI explanations for credit decisions.
- Mobile-friendly, scalable platform designed for rural use.

KisanCred's Innovative Cycle



UNIQUENESS & INNOVATION FACTOR



CHALLENGES

- Real-time Agri-Trust Score using satellite, weather, and transaction data.
- Dynamic, personalized risk-based pricing rewarding reliable farmers.
- Satellite-verified crop activity to prevent fraud.
- Transparent AI explanations for credit decisions.
- Mobile-friendly, scalable platform designed for rural use.

FEASIBILITY & CHALLENGES

Research Page:

1. R. Palsaniya, R. Upadhyay, S. S. Bochalya, B. C. Bochalya, and A. K. Saini, "Explore the problems experienced by the farmer in accessing rural credit in Udaipur, Districts," International Journal of Agriculture Extension and Social Development, vol. 8, no. 5, pp. 255-257, May 202
2. F. U. Khan, M. Nouman, L. Negrut, J. Abban, L. M. Cismas, and M. F. Siddiqi, "Constraints to agricultural finance in underdeveloped and developing countries: a systematic literature review," International Journal of Agricultural Sustainability, vol. 22, no. 1, Art. no. 2329388, 2024
3. M. Soundarya and G. Jayabal, "Problems Faced By Financial Institutions While Sanctioning Agriculture Credit to the Farmers in Taminadu," International Journal of Recent Technology and Engineering, Sep. 2019
4. V. Mahajan and N. V. Ramana, "Agricultural Finance by Microfinance Institutions: Problems and the Way Forward," BASIX, UNCTAD Geneva, Nov. 2004

Research Page:

<https://www.microsave.net/2020/07/15/headline-why-do-financial-institutions-shy-away-from-financing-farmers-in-india/>