BRIDGING THE FINANCIAL GAP FOR INDIA'S 190 MILLION "CREDIT INVISIBLE" INDIVIDUALS

By Aiswarya Sunil

THE "THIN-FILE" PROBLEM – CREDIT INVISIBLE TRAP

Traditional **credit scoring** (CIBIL) relies on **banking history**. **190M+ Indians** (micro-entrepreneurs, gig workers) lack this history, creating a **cold start** problem where they **cannot access formal credit**.
While account ownership is near 90% due to Jan Dhan, the Financial Inclusion Index (2025), shows a gap in quality and usage.

The Stakeholder Pain: Without a formal score, reliable borrowers are forced into **predatory lending cycles** with 30-40% interest rates, **stifling grassroots economic growth.**

Current digital lenders solve this by centralizing sensitive user data, creating massive **privacy risks** and failing to comply with **India's DPDP Act 2023.**

CREDIT-BASED TO CASH-FLOW & BEHAVIOR-BASED SYSTEMS

The Data Inputs (Alternative Signals)

- **UPI Velocity**: Not just the balance, but the **regularity and source of payments**. Frequent micro-transactions from varied sources indicate a healthy, active business.
- **Utility Discipline**: **Punctuality in electricity, water, and mobile bill recharges.** This is a strong indicator for character and willingness to pay.
- **Inventory Cycles**: Tracking how often a shopkeeper restocks essential goods. High turnover + consistent procurement = low-risk business.

Impact

The platform allows the unbanked to carry their creditworthiness to any global lender. This enables financial institutions to drastically reduce non-performing assets (NPAs) by unlocking a massive, previously 'invisible' market through data-driven risk assessment.

A PRIVACY-FIRST, TRUSTLESS CREDIT ENGINE USING FEDERATED ML & BLOCKCHAIN.

Tech Stack:

- **ML Core: Federated XGBoost** trains models locally on user devices. Raw financial data never leaves the phone, <u>only mathematical gradients</u> are shared.
- **Data Integrity:** Encrypted data fragments are stored on IPFS, while verifiable CID Hashes are logged on a Permissioned Blockchain.
- **Transparency:** Use SHAP (SHapley Additive exPlanations) to tell the user <u>why they got a certain score</u> (e.g. score improved because of consistent utility payments).

Watch the 2 minute impact story here: