Business Requirements Document (BRD) Project Name: Al Margin Optimizer for F&O Large Traders Version: 2.0 Date: 2025-04-08

1. Objectives Reduce collateral over-pledging by 20-30% for HNIs.

Integrate real-time news/sentiment into margin calculations.

Achieve ₹3Cr ARR within 12 months.

- 2. Stakeholders Role Responsibility Brokers (ICICI/Kotak) Provide API access Data Scientists Train multi-model ensemble Traders Pilot testing (50+ HNIs)
- 3. Compliance & Risks Data Privacy: AES-256 encryption for portfolio data.

Regulatory: Read-only access to broker systems (no SEBI approval).

Product Requirements Document (PRD)

1. Features

Feature Tech Stack Input Source News Sentiment Analyzer HuggingFace Transformer NewsAPI.org, Twitter Macro Impact Engine yfinance, newspaper3k Forex/Commodity APIs Ensemble Predictor XGBoost + LSTM NSE historical data 2. User Flow

mermaid Copy flowchart TD
A[User logs in] --> B{Fetch Portfolio}
B --> C[Analyze News/Macro]
C --> D[Calculate Optimal Margin]
D --> E[Alert User]
3. APIs Required

python Copy

Sample API calls

news_api = "https://newsapi.org/v2/everything?q=trump+tariffs"
twitter_api = "https://api.twitter.com/2/tweets/search/recent?query=NIFTY"