LoanScoreAI v6.0 – Replit Development Guide

# 📌 Objective

Develop the LoanScoreAI v6.0 Scorecard in Replit, which assesses loan applicants based on both intent to repay and probability of disbursement. This rule-based scorecard uses weighted scoring logic and risk buckets to generate final credit decisions.

# 🛠️ Functional Requirements

The application must:

**- Accept individual or CSV-based bulk input data**- Apply clearance rules to filter out ineligible applicants  
- Score each eligible applicant using weighted variable bands  
- Aggregate scores into a 0–100 final score  
- Assign a risk bucket (A, B, C, D) based on score and post-score movement logic  
- Output results in downloadable or viewable format

# ⚙️ Scoring Variables & Logic

|  |  |  |  |
| --- | --- | --- | --- |
| Group | Variable | Weight | Scoring Bands / Logic |
| Core Credit Inputs | Credit Score | 15% | -1 / 0 → 0.0 1–99 → 0.2 100–599 → 0.0 600–649 → 0.3 650–699 → 0.6 700–729 → 0.8 730–749 → 0.9 750+ → 1.0 |
|  | FOIR | 7% | ≤0.35 → 1.0 0.36–0.45 → 0.6 0.46–0.55 → 0.3 >0.55 → 0.0 |
|  | DPD30Plus | 7% | 0 → 1.0 1 → 0.5 ≥2 → 0.0 |
|  | Enquiry Count | 6% | 0–1 → 1.0 2–3 → 0.6 >3 → 0.2 |
| Income Stability | Monthly Income | 8% | >₹30K → 1.0 ₹20K–30K → 0.6 ₹18K–20K → 0.4 ₹15K–18K → 0.3 <₹15K → 0.0 |
|  | Age | 4% | 26–35 → 1.0 36–45 → 0.8 21–25 / 46–55 → 0.6 56–60 → 0.4 <21 or >60 → 0.0 |
| Behavioral Analytics | Credit Vintage | 6% | >60 → 1.0 37–60 → 0.8 25–36 → 0.6 13–24 → 0.4 7–12 → 0.2 ≤6 → 0.0 |
|  | Loan Mix Type | 6% | PL/HL/CC → 1.0 Gold + Consumer Durable → 0.6 Only Gold → 0.3 Agri/Other loans → 0.4 |
|  | Loan Completion Ratio | 7% | >0.7 → 1.0 0.4–0.7 → 0.6 <0.4 → 0.3 |
|  | Defaulted Loans | 6% | 0 → 1.0 >0 → 0.0 |
| Exposure Metrics | Unsecured Loan Amount | 5% | No unsecured → 0.6 <₹50K → 0.8 ₹50K–1L → 1.0 >₹1L → 0.6 |
|  | Outstanding Amount % | 5% | <30% → 1.0 30–60% → 0.6 >60% → 0.3 |
| Intent Signals | Our Lender Exposure | 5% | >0 → 1.0 0 → 0.0 |
|  | Channel Type | 5% | Merchant/Referral → 1.0 Digital/Other → 0.5 |

# 🚫 Clearance Rules (Pre-Score)

|  |  |
| --- | --- |
| Rule Criteria | Action |
| PAN is missing | Decline (D) |
| Age < 21 or > 60 | Decline (D) |
| Monthly Income < ₹15,000 | Decline (D) |
| WriteOffFlag = True | Decline (D) |
| DPD30Plus > 2 | Decline (D) |
| Defaulted Loans > 0 | Decline (D) |

# 📊 Post-Score Movement Logic

|  |  |
| --- | --- |
| From → To | Conditions |
| A → B | Score ≥ 90 but 2+ of: DPD > 0, Enquiry > 3, FOIR > 0.45, LoanMix = Gold only, CompletionRatio < 0.5 |
| B → A | Score 78–89.99 and 4+ of: CreditScore ≥ 770, DPD = 0, FOIR < 0.35, PL/HL in LoanMix, OurLenderExposure > 0 |
| C → B | Score 60–77.99 and ALL: CreditScore ≥ 730, CreditVintage ≥ 36, CompletionRatio > 0.6 |
| D → C | Score < 60 and 3+ of: CreditScore ≥ 750, FOIR < 0.35, DPD = 0, Enquiry ≤ 2, Income ≥ ₹30K |

# 📦 Final Risk Buckets

|  |  |  |
| --- | --- | --- |
| Bucket | Score Range | Decision |
| A | ≥ 90 | Auto-approve |
| B | 78–89.99 | Recommend |
| C | 60–77.99 | Refer |
| D | < 60 | Decline |