

***Proposed Sub-Project for GEM***

**A) Loan Defaulter**

**Problem:** Financial Institutions' exposure to bad debts

**Goal:** Early detection of defaulters and health check of institution loan system (Credit Risk Modeling)

- Individuals
  - Ensure ability to repay based on income and current debt loan
  - Ensure willingness to pay based on past credit performance
- Financial Institutes
  - Calculate exposure to internal credit risks for Financial Institutes
  - Calculate inflow and outflow patterns – bad debt
- Data Pointers
  - Financial Indicators
    - Missed and delayed payrolls, Overdraft, Spending Patterns
  - Behavioral indicators
    - Missed unanswered calls
  - External indicators
    - Telco-utility bill payment
  - Industry indicators
    - Economic industry specific signals

**B) SafeEd**

**Problem:** Unpredictable gun violence in educational institutions.

**Goal:** Early detection of potential threat of gun violence in educational institutions

- Remedial actions to avoid any mishap (counseling and surveillance)
- Profile students and staff for any suspicious behavior.
- Data Pointers:
  - Social media contents/feeds
  - Financial transactions
  - Attendance pattern
  - Browsing history
  - Gun procurement
  - Behavior (mental), family and medical history obtained from medical records or feedback from staff.