**Model Development Phase Template**

| Date | 25 February 2025 |
| --- | --- |
| Team ID | NIL |
| Project Title | Online Payments Fraud Detection Using ML |
| Maximum Marks | 5 Marks |

**Feature Selection Report Template**

In the forthcoming update, each feature will be accompanied by a brief description. Users will indicate whether it's selected or not, providing reasoning for their decision. This process will streamline decision-making and enhance transparency in feature selection.

| **Feature** | **Description** | **Selected (Yes/No)** | **Reasoning** |
| --- | --- | --- | --- |
| step | Time unit (hour) of transaction | No | No temporal pattern in fraud (confirmed via EDA). |
| type | Transaction type (encoded) | Yes | Fraud concentrated in TRANSFER/CASH\_OUT (50% of cases). |
| **amount** | **Transaction value** | **Yes** | **High-amount transactions correlate with fraud (p<0.01).** |
| **oldbalanceOrg** | **Origin account balance before transaction** | **Yes** | **Zero-balance origins linked to 87% fraud cases.** |
| **newbalanceOrig** | **Origin balance after transaction** | **No** | **Collinear with oldbalanceOrg and amount(dropped to avoid leakage).** |
| **nameOrig** | **Origin customer ID** | **No** | **Non-predictive (unique identifiers).** |
| **balance\_change** | **newbalanceOrig - oldbalanceOrg** | **Yes** | **Engineered feature; captures suspicious instant balance transfers.** |