**CREDIT CARD FRAUD DETECTION USING AIML**

**PROBLEM STATEMENT:**

Credit card fraud has emerged as one of the most pressing challenges in the digital financial ecosystem. With the exponential rise of online transactions, mobile banking, e-commerce platforms, and contactless payments, the risk response time.of fraud has significantly increased. Fraudulent activities not only result in direct financial losses but also erode consumer trust in digital payment systems and place heavy operational and reputational burdens on financial institutions and merchants. Traditional fraud detection systems, which primarily rely on predefined rules and static thresholds, are no longer sufficient to tackle modern fraud schemes. These systems often struggle in two major ways. First, they generate a leads to revenue losses for merchants and damages customer loyalty. Second, they frequently fail to detect high rate of false positives, flagging legitimate transactions as fraudulent. This not only frustrates genuine customers but also emerging fraud patterns that are dynamic, well-hidden, and technologically sophisticated. Fraudsters exploit stolen card details, phishing techniques, card skimming, account takeovers, and even AI-powered scams that mimic real user behavior, making detection increasingly complex. Finally, manual investigation of fraudulent transactions remains a costly and time-consuming process for banks and merchants. Relying heavily on human intervention increases operational expenses and slows down