**Beginner-Level ML Features**

1. **Fraud Detection**
   * Use logistic regression or random forest to flag suspicious transactions
   * Features: Payment amount, frequency, time of day, user behavior patterns
   * Output: Risk score (0-1) for each transaction
2. **Smart Payment Suggestions**
   * Clustering (K-Means) to suggest optimal donation amounts
   * "People like you usually donate ₹X" based on similar users
3. **Personalized Thank You Messages**
   * NLP with TF-IDF to generate dynamic thank-you notes
   * Match message tone to donation amount ("Generous supporter!" vs "Thanks for the coffee!")
4. **User Segmentation**
   * Unsupervised learning (K-Means/PCA) to group donors
   * Visualize clusters in admin dashboard

**Intermediate-Level Features**

1. **Churn Prediction**
   * Predict which donors might stop contributing (LSTM time-series analysis)
   * Intervention: Send special offers to at-risk users
2. **Dynamic Pricing Model**
   * Reinforcement learning to optimize suggested amounts
   * Adapts based on conversion rates
3. **Anomaly Detection**
   * Isolation Forest or Autoencoders for unusual patterns
   * Detect sudden spikes in micro-donations
4. **Sentiment Analysis**
   * Analyze donor messages with BERT/Transformers
   * Flag negative sentiment for follow-up

**Advanced-Level Features**

1. **Personalized Payment Plans**
   * Deep Q-Learning to recommend installment plans
   * Considers user's historical behavior
2. **Voice/Image Donations**
   * CNN for image donations (snap a receipt to donate)
   * Speech-to-text for voice commands ("Donate ₹100 to education")
3. **Cross-Platform Recommender**
   * Graph neural networks to suggest related causes
   * "Users who supported X also liked Y"
4. **Generative Thank You Content**
   * Fine-tune GPT-3.5/Gemini to write personalized thank-you emails
   * Include impact stories based on donation purpose