📄 Bankruptcy Prediction Project — PPT Content

📌 Slide 1: Project Name

Bankruptcy Prediction Dashboard: Assessing Corporate Risk Profiles

📌 Slide 2: Mentor's Name & Team Members' Names

- **Mentor:** [Your Mentor's Name]
- **Team Members:**
  - Member 1: [Name]
  - Member 2: [Name]
  - Member 3: [Name]
  - Member 4: [Name]

📌 Slide 3: Objective

- Predict the **probability of bankruptcy** for companies based on six key risk factors.
- Help lenders make informed loan approval decisions.
- Provide clear, actionable recommendations (Approve / Approve with Collateral / Decline).

📌 Slide 4: Dataset Details

- Dataset: `bankrupt_clean.csv`
- ~300 rows
- No missing values
- Six input features:
  - Industrial Risk
  - Management Risk
  - Financial Flexibility

    - Credibility
    - Competitiveness
    - Operating Risk
- Target: Bankruptcy (Yes/No)

📌 Slide 5: Exploratory Data Analysis (EDA)

- Risk factors were analyzed against bankruptcy outcomes.
- Observed strong relationship between industrial risk & bankruptcy.
- Financial flexibility appeared to reduce bankruptcy risk.
- Outcome variable was balanced enough for model building.

📌 Slide 6: Industrial Risk Insights

- Higher industrial risk correlates with increased bankruptcy probability.
- Most bankrupt companies had industrial risk at high (1.0).

(Include bar chart: *Industrial Risk vs Bankruptcy (%)*)

📌 Slide 7: Financial Flexibility Insights

- Higher financial flexibility lowers bankruptcy risk.
- Companies with flexibility level 0 had higher bankruptcy rates.

(Include bar chart: *Financial Flexibility vs Bankruptcy (%)*)

📌 Slide 8: Key Highlights

- Overall bankruptcy rate: ~X% (you can compute from your data).
- High risk (≥70%) companies: [Count]
- Medium risk (50–70%) companies: [Count]
- Low risk (<50%) companies: [Count]

(Include metric cards or summary table)

📌 Slide 9: Model Building — Approach

- Chose Logistic Regression for interpretability & effectiveness.
- Features scaled using StandardScaler.
- Trained using labeled bankruptcy data.

📌 Slide 10: Model Selection

- Evaluated multiple models (Logistic Regression, Random Forest, etc.).
- Logistic Regression chosen for best trade-off between accuracy & simplicity.

📌 Slide 11: Feature Engineering

- Converted categorical risks into numeric values: 0, 0.5, 1.
- Ensured all six features were properly scaled before training.

📌 Slide 12: Model Training

- Trained on ~80% of the data, tested on ~20%.
- Achieved good accuracy and recall.

📌 Slide 13: Evaluation Metrics

- Accuracy: ~X%
- Precision: ~X%
- Recall: ~X%
- F1-score: ~X%

(Add confusion matrix screenshot here)

📌 Slide 14: Feature Importance

- Most influential features:
    - Industrial Risk
    - Competitiveness

    - Financial Flexibility
- Feature correlations displayed as bar chart.

(Include: *Feature Importance Correlation Chart*)

📌 Slide 15: Final Model Performance

- Predictions aligned well with actual outcomes.
- Business-relevant thresholds:
    - ≥70% → Decline Loan
    - 50–70% → Approve with Collateral
    - <50% → Approve

📌 Slide 16: App Development

- Built using Streamlit for interactive dashboard.
- User-friendly login interface.
- Supports CSV upload & manual data entry.

📌 Slide 17: App Features

- Predictions based on uploaded or manual data.
- Detailed recommendation for each company.
- Downloadable prediction results.

📌 Slide 18: EDA in the App

- Visualizes uploaded data to help users understand risk distribution.
- Interactive charts (Industrial Risk, Financial Flexibility).

📌 Slide 19: Feature Importance in the App

- Dynamically shows most impactful features on uploaded data.
- Helps users see what drives bankruptcy risk in their data.

📌 Slide 20: Summary Metrics

- Displays total companies, risk category counts, and average risk.
- Pie chart showing overall risk distribution.

📌 Slide 21: Final Loan Decision

- Based on risk categories and business rules:
  - High risk → Decline
  - Medium → Approve with Collateral
  - Low → Approve
- Final recommendation clearly displayed.

📌 Slide 22: Example Decisions

- Low risk company: Approved
- Medium risk company: Approved with collateral
- High risk company: Declined
- Overall decision balanced on majority of low/medium risk companies.

📌 Slide 23: Screenshot of the APP Page

(Add screenshot of your running app interface)

📌 Slide 24: Challenges Faced During the Project

- Balancing model interpretability with accuracy.
- Designing user-friendly and visually clear dashboards.
- Ensuring EDA updates correctly on new data uploads.
- Selecting appropriate thresholds for decision-making.

📌 Slide 25: Thank You

- Acknowledgement to mentor, team members, and reviewers.
- Ready to answer questions.