**Slide 1: Title Slide**

* **Project Title:** Phishing URL Detection using Machine Learning
* **Team Members:** [Your Name(s)]
* **Department:** [Your Department]
* **Institution:** [Your College/University Name]

**Slide 2: Introduction**

* Phishing is a major cyber threat that tricks users into giving away personal data.
* Fake websites mimic real ones to steal credentials, banking info, etc.
* Manual detection is impractical — automation is essential.

**Slide 3: Objective**

* Build a system to detect phishing websites using URL analysis.
* Automate detection through machine learning.
* Provide a simple GUI and web-based tool for users.

**Slide 4: Dataset**

* URLs labeled as "phishing" or "legitimate"
* CSV file with URLs and labels
* Extracted features like: IP in URL, use of HTTPS, suspicious words, etc.

**Slide 5: Feature Extraction**

* Extracted from raw URLs using regex and string checks:
  + URL Length
  + Has IP address?
  + Uses HTTPS?
  + Suspicious words: login, secure, update...
  + Special characters: @, -, /

**Slide 6: Model Training**

* Algorithm: Random Forest Classifier
* Libraries: Scikit-learn, Pandas
* Train/Test split: 80%/20%
* Achieved ~96-97% accuracy
* Saved using Joblib

**Slide 7: Application Modules**

* **Feature Extractor:** Parses URL and generates feature set
* **Model Trainer:** Trains ML model
* **Predictor:** Loads model and makes predictions
* **GUI:** Tkinter-based interface
* **Web App:** Flask-based form (optional)

**Slide 8: GUI Demo**

* User enters URL into the app
* Model predicts if it's “Phishing” or “Legitimate”
* Real-time feedback with colored result label

**Slide 9: Results**

* Classification Report:
  + Precision, Recall, F1 Score all ~0.96-0.97
* Model performs well on unseen URLs
* Robust for most common phishing patterns

**Slide 10: Conclusion**

* Effectively detects phishing websites from URLs
* Simple and fast prediction using extracted features
* Helps raise user awareness about suspicious links

**Slide 11: Future Enhancements**

* Use larger dataset
* Integrate into browsers, email clients
* Explore deep learning for better accuracy
* Develop mobile app version

**Slide 12: Thank You**

* Questions?
* Contact: [Your Email / GitHub / LinkedIn]