Project Title

Phishing Detection with ABAC-Based Security
Machine Learning + Secure Web App

Project Overview

- Web-based app to detect phishing emails
- Trained ML model (PHINet)
- ABAC security model
- Admin-only retraining/log access

Key Features

- ▢ User Signup/Login
- ▢ Email Analyzer with ML detection
- ▢ Admin-only Access Logs
- ▢ Secure CSV Export
- ▢ ABAC enforcement

Architecture

- Frontend: HTML + CSS (Professional UI)
- Backend: Flask (Python)
- ML: Scikit-learn (TF-IDF + MLPClassifier)
- DB: SQLite3

ABAC Policy Summary

Action	Access Rule
Submit Email	verified == True
View Results	department == Security
Retrain Model	role == admin
Download CSV	clearance == high
View Logs	role == admin

Demo Walkthrough

1. Signup/Login as different roles
2. Submit email → see result
3. Try restricted actions (non-admin)
4. Login as admin → retrain, download, view logs

Sample Screenshots

- Homepage form
- Phishing detection result
- Access denied message
- Logs dashboard

Technology Stack

- Flask: Routing/sessions
- Werkzeug: Password security
- Scikit-learn: TF-IDF + MLPClassifier
- SQLite3: Embedded DB

Summary & Outcome

- Secure & modular phishing detection
- Real ABAC policy integration
- Ready for deployment

Contact & Links

- Developer: Vasant Lohar
- GitHub: github.com/yourusername
- Email: your.email@example.com

Thank you! 🙏