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! 🎓