

# 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
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- Thank you! 