Project Title

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Phishing Detection with ABAC-Based Security

Machine Learning + Secure Web App

Project Overview

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- Web-based app to detect phishing emails

- Trained ML model (PHINet)

- ABAC security model

- Admin-only retraining/log access

Key Features

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

Architecture

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- Frontend: HTML + CSS (Professional UI)

- Backend: Flask (Python)

- ML: Scikit-learn (TF-IDF + MLPClassifier)

- DB: SQLite3

ABAC Policy Summary

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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

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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

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- Homepage form

- Phishing detection result

- Access denied message

- Logs dashboard

Technology Stack

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- Flask: Routing/sessions

- Werkzeug: Password security

- Scikit-learn: TF-IDF + MLPClassifier

- SQLite3: Embedded DB

Summary & Outcome

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- Secure & modular phishing detection

- Real ABAC policy integration

- Ready for deployment

Contact & Links

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- Developer: Vasant Lohar

- GitHub: github.com/yourusername

- Email: your.email@example.com

Thank you! ∎