SMISHING FILTER

BOKYUNG LEE

INTRODUCTION

TeamName: **Bokdongari**

NoOfMembers: **1 SOLO**

ProjectTitle: **Smishing Filter**

Aim: **Build RESTful API with tracking AI smishing**

PROJECT SUMMARY

🛡️ Smishing Filter

Smishing Filter is an AI-powered RESTful API project for detecting smishing messages.

It leverages the OpenAI GPT-4 Vision API and a custom analysis engine to evaluate smishing risks from both text and image inputs, providing the results in JSON format.

The API performs various security checks, including URL safety, sending patterns, and sensitive links, and is built on FastAPI for scalability, designed to be easily integrated into other applications or services.

Tech Stack

📌 **Backend Framework:** FastAPI

📌 **AI/ML:** OpenAI GPT-4 Vision API

📌 **Programming Language:** Python 3.12

📌 **Containerization:** Docker, Docker Compose

📌 **Database / Caching:** PostgreSQL, Redis

📌 **Message Broker:** RabbitMQ

📌 **Frontend / Demo:** Streamlit

📌 **Security / Analysis Engine:** Custom analysis logic for URL safety, sending patterns, and sensitive link checks

📌 **Environment Management:** Python virtualenv, dotenv for environment variables

Features

📌 **Text and image-based smishing detection**

📌 **Provides risk score (risk_score) and risk level (risk_level)**

📌 **Returns analysis results in JSON format**

📌 **Security assessment through URL safety, sending patterns, and sensitive link checks**

📌 **Extensible RESTful API built with FastAPI**

📌 **Includes a Streamlit demo web app**

DEMO

Youtube link: https://youtu.be/hXHGs1FBzZ4

Github link: https://github.com/Estelle-Lee/Smishing-Filter

FUTURE ROADMAP

💡 Support for multilingual smishing detection

💡 Integration with smishing pattern database

💡 Add real-time alert functionality

💡 Provide case reports showing how integrating the API can improve application security policies