



All Extensions



PhishGuard 1.0

AI-powered phishing protection for URLs.

ID: fibkjooljpjcfddlpbmieceipabmeggl

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The screenshot shows a code editor interface with multiple tabs and panels. The main area displays a Python file named `app.py`. The code implements a Flask application that loads a machine learning model from `model.pkl` and uses it to classify URLs based on specific keywords and SSL status. A sidebar panel on the right is titled "Build with agent mode" and includes a note about AI responses being inaccurate, a "Generate Agent Instructions" button, and a link to onboard AI onto the codebase.

```
from flask import Flask, request, jsonify
from joblib import load
from features import extract_features # <- the correct extractor here
import os

app = Flask(__name__)

# Load model
MODEL_PATH = os.path.join(os.path.dirname(__file__), "model.pkl")
if os.path.exists(MODEL_PATH):
    model = load(MODEL_PATH)
else:
    model = None
    print("WARNING: model.pkl not found. Using dummy logic.")

Tabnine | Edit | Test | Explain | Document
def classify_url(url: str):
    """Return label + score based on ML model or fallback rules."""
    global model

    if model is None:
        score = 0.0
        low = url.lower()
        for w in ["login", "verify", "update", "bank", "secure", "free", "win"]:
            if w in low:
                score += 0.3
        if "https://" not in low:
            score += 0.2
        score = min(score, 1.0)
    else:
        features = extract_features(url) # <- uses correct 12-feature extractor
        prob = model.predict_proba([features])[0][1]
        score = float(prob)

    if score < 0.3:
        label = "safe"
    else:
        label = "unsafe"

    return {"label": label, "score": score}
```

The screenshot shows a code editor interface with the following details:

- File Explorer:** On the left, it lists several files and folders:
 - OPEN EDITORS:** features.py (backend), model.pkl, app.py, manifest.json, background.js, popup.html, popup.js, train_model.py, ml, urlset.csv.
 - PISHGUARD:** backend, _pycache_, venv, app.py, features.py (highlighted).
 - extension:** background.js, manifest.json, PhishGuardLogo.PNG, popup.html, popup.js.
 - ml:** train_model.py.
- Editor Area:** The main area displays the `features.py` file content. The code defines a function `extract_features(url)` that uses `urlparse` to parse the URL and extract various features. It includes logic to check for specific patterns in the URL's scheme and path.

```
from urllib.parse import urlparse
import re

def extract_features(url):
    parsed = urlparse(url)
    return [
        len(url),
        len(parsed.netloc),
        len(parsed.path),
        url.count('.'),
        url.count('_'),
        url.count('@'),
        url.count('?'),
        url.count('-'),
        sum(c.isdigit() for c in url),
        sum(c.isalpha() for c in url),
        1 if parsed.scheme == "https" else 0,
        1 if re.search(r'login|verify|update|secure|account|bank', url.lower()) else 0
    ]
```
- Bottom Bar:** Includes icons for Launchpad, Live Share, VIM: DISABLED, Select Interpreter, Go Live, Quokka, fabnine basic, and Prettier.
- Right Panel:** Shows a "Build with agent mode" section with a note about AI responses being inaccurate and a button to "Generate Agent Instructions".

The screenshot shows a code editor interface with the following details:

- File Explorer:** On the left, it lists several files and folders:
 - OPEN EDITORS:** manifest.json, background.js, popup.html, popup.js, train_model.py
 - PHISHGUARD:** backend, pycache_, venv, app.py, features.py, model.pkl
 - extension:** background.js, manifest.json, PhishGuardLogo.PNG, popup.html, popup.js
 - ml:** train_model.py, uriset.csv
- Code Editor:** The main area displays the `train_model.py` file. The code uses Python's `pandas` library to load a dataset, handle missing values, split the data into training and testing sets, and train a `RandomForestClassifier`. It also saves the trained model to a file named `model.pkl`.

```
3 from sklearn.model_selection import train_test_split
4 from sklearn.ensemble import RandomForestClassifier
5 from joblib import dump
6 import os
7 print("Loading dataset...")
8 df = pd.read_csv("../uriset.csv", on_bad_lines="skip", encoding="latin-1", low_memory=True)
9 print("Cleaning data...")
10 # Convert all columns except domain + label to numeric
11 for col in df.columns:
12     if col not in ["domain", "label"]:
13         df[col] = pd.to_numeric(df[col], errors="coerce")
14 # Remove rows where label is missing
15 df = df.dropna(subset=["label"])
16 # Fill missing numeric values with 0 (safe choice for ML)
17 df = df.fillna(0)
18 # Split X and y
19 y = df["label"]
20 X = df.drop(columns=["label", "domain"], errors="ignore")
21 print("Final feature count:", X.shape[1])
22 # Train/test split
23 X_train, X_test, y_train, y_test = train_test_split(
24     X, y, test_size=0.2, random_state=42
25 )
26 print("Training model...")
27 model = RandomForestClassifier(
28     n_estimators=300,
29     max_depth=None,
30     random_state=42,
31     n_jobs=-1
32 )
33 model.fit(X_train, y_train)
34 acc = model.score(X_test, y_test)
35 print(f"Accuracy: {acc * 100:.2f}%")
36 # Save model to backend
37 output_path = "../backend/model.pkl"
38 dump(model, output_path)
39 print("Model saved > ", output_path)
```
- Right Panel:** A sidebar titled "Build with agent mode" is visible, containing a message about AI responses being inaccurate and a link to "Generate Agent Instructions".
- Bottom Bar:** Includes icons for launchpad, Live Share, VIM-DISABLED, Select Interpreter, Go Live, Quokka, tabbing basic, and Prettier.

```
(venv) C:\Users\nitan\PhishGuard\backend>python app.py
 * Serving Flask app 'app'
 * Debug mode: on
WARNING: This is a development server. Do not use it in a production deployment. Use a production WSGI server instead.
 * Running on all addresses (0.0.0.0)
 * Running on http://127.0.0.1:5000
 * Running on http://172.192.53.110:5000
Press CTRL+C to quit
 * Restarting with stat
 * Debugger is active!
 * Debugger PIN: 204-567-138
C:\Users\nitan\PhishGuard\backend\venv\Lib\site-packages\sklearn\utils\validation.py:2749: UserWarning: X does not have
valid feature names, but RandomForestClassifier was fitted with feature names
    warnings.warn(
127.0.0.1 - - [23/Nov/2025 21:54:52] "POST /check_url HTTP/1.1" 200 -
C:\Users\nitan\PhishGuard\backend\venv\Lib\site-packages\sklearn\utils\validation.py:2749: UserWarning: X does not have
valid feature names, but RandomForestClassifier was fitted with feature names
    warnings.warn(
127.0.0.1 - - [23/Nov/2025 21:55:01] "POST /check_url HTTP/1.1" 200 -
C:\Users\nitan\PhishGuard\backend\venv\Lib\site-packages\sklearn\utils\validation.py:2749: UserWarning: X does not have
valid feature names, but RandomForestClassifier was fitted with feature names
    warnings.warn(
127.0.0.1 - - [23/Nov/2025 21:55:07] "POST /check_url HTTP/1.1" 200 -
C:\Users\nitan\PhishGuard\backend\venv\Lib\site-packages\sklearn\utils\validation.py:2749: UserWarning: X does not have
valid feature names, but RandomForestClassifier was fitted with feature names
    warnings.warn(
127.0.0.1 - - [23/Nov/2025 21:55:11] "POST /check_url HTTP/1.1" 200 -
C:\Users\nitan\PhishGuard\backend\venv\Lib\site-packages\sklearn\utils\validation.py:2749: UserWarning: X does not have
valid feature names, but RandomForestClassifier was fitted with feature names
```