breast_cancer_prediction\app.py

```python
import numpy as np
from flask import Flask, request, jsonify, render_template
import pickle
import os

app = Flask(__name__)

model_path = 'best_model_name.pkl'

print(f"Looking for model file at: {os.path.abspath(model_path)}")

try:
    with open(model_path, 'rb') as f:
        model = pickle.load(f)
    print(f"Model loaded successfully: {type(model)}")
except Exception as e:
    print(f"Failed to load model: {str(e)}")
    model = None  # set to None on failure

@app.route('/')
def home():
    return render_template('index.html')

@app.route('/predict', methods=['POST'])
def predict():
    if model is None:
        return render_template('index.html', prediction_text="Model not loaded, prediction impossible.")
    try:
        float_features = [float(x) for x in request.form.values()]
        final_features = [np.array(float_features)]
        prediction = model.predict(final_features)
        diagnosis = 'Benign' if prediction[0] == 1 else 'Malignant'
        return render_template('index.html', prediction_text=f'The tumor is likely: {diagnosis}')
    except Exception as e:
        return render_template('index.html', prediction_text=f'Error: {str(e)}')

@app.route('/predict_api', methods=['POST'])
def predict_api():
    if model is None:
        return jsonify({'error': 'Model not loaded'})
    try:
        data = request.get_json(force=True)
        input_data = [float(x) for x in list(data.values())]
        prediction = model.predict([np.array(input_data)])
        diagnosis = 'Benign' if prediction[0] == 1 else 'Malignant'
        return jsonify({'diagnosis': diagnosis})
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    except Exception as e:
        return jsonify({'error': str(e)})

if __name__ == "__main__":
    app.run(debug=True)

```