# -\*- coding: utf-8 -\*-

import streamlit as st

import pandas as pd

import joblib

import os

# Set Streamlit page config

st.set\_page\_config(page\_title="CKD Prediction")

# App title

st.title("Chronic Kidney Disease Prediction")

# Description

st.write("Enter the patient's clinical data to predict the presence of Chronic Kidney Disease (CKD).")

# Input form

age = st.number\_input("Age", min\_value=0, max\_value=120)

bmi = st.number\_input("BMI")

serumcreatinine = st.number\_input("Serum Creatinine")

gfr = st.number\_input("GFR")

systolicbp = st.number\_input("Systolic Blood Pressure")

diastolicbp = st.number\_input("Diastolic Blood Pressure")

hba1c = st.number\_input("HbA1c")

bunlevels = st.number\_input("BUN Levels")

cholesterolldl = st.number\_input("LDL Cholesterol")

acr = st.number\_input("ACR")

# Load model

model\_path = "tuned\_balanced\_rf\_CKD.pkl"

if not os.path.exists(model\_path):

st.error(f"Model file '{model\_path}' not found in this folder.")

st.stop()

model = joblib.load(model\_path)

# Predict

if st.button("Predict"):

input\_data = pd.DataFrame([[age, bmi, serumcreatinine, gfr, systolicbp,

diastolicbp, hba1c, bunlevels, cholesterolldl, acr]],

columns=['age', 'bmi', 'serumcreatinine', 'gfr', 'systolicbp',

'diastolicbp', 'hba1c', 'bunlevels', 'cholesterolldl', 'acr'])

prediction = model.predict(input\_data)[0]

if prediction == 1:

st.error("⚠️ CKD Detected")

else:

st.success("No CKD Detected")