import streamlit as st

import pandas as pd

import joblib

# Load model and columns

model = joblib.load('delivery\_model.pkl')

model\_columns = joblib.load('model\_columns.pkl')

# Function to prepare user input

def prepare\_input(user\_input, model\_columns):

df = pd.DataFrame([user\_input])

# Add missing columns with 0

for col in model\_columns:

if col not in df.columns:

df[col] = 0

# Reorder columns to match training

df = df[model\_columns]

return df

# Streamlit App UI

st.title("Delivery Time Prediction AI Bot")

st.write("Enter order details below to predict delivery time:")

# Inputs

distance = st.number\_input("Distance (km)", min\_value=0.0, value=5.0)

prep\_time = st.number\_input("Preparation Time (min)", min\_value=0, value=10)

courier\_exp = st.number\_input("Courier Experience (yrs)", min\_value=0, value=2)

st.write("### Select Weather")

weather\_options = ['Sunny', 'Rainy', 'Foggy', 'Snowy', 'Windy']

weather = st.selectbox("Weather", weather\_options)

st.write("### Select Traffic Level")

traffic\_options = ['Low', 'Medium', 'High']

traffic = st.selectbox("Traffic Level", traffic\_options)

st.write("### Select Time of Day")

time\_options = ['Morning', 'Afternoon', 'Evening', 'Night']

time\_of\_day = st.selectbox("Time of Day", time\_options)

st.write("### Select Vehicle Type")

vehicle\_options = ['Bike', 'Car', 'Van', 'Scooter']

vehicle = st.selectbox("Vehicle Type", vehicle\_options)

# Prepare input dictionary

user\_input = {

'Distance\_km': distance,

'Preparation\_Time\_min': prep\_time,

'Courier\_Experience\_yrs': courier\_exp,

f'Weather\_{weather}': 1,

f'Traffic\_Level\_{traffic}': 1,

f'Time\_of\_Day\_{time\_of\_day}': 1,

f'Vehicle\_Type\_{vehicle}': 1

}

# Prediction button

if st.button("Predict Delivery Time"):

sample\_df = prepare\_input(user\_input, model\_columns)

pred = model.predict(sample\_df)[0]

st.success(f"Predicted Delivery Time: {round(pred, 2)} minutes")