# SMS Spam Detection Streamlit App - Code

import nltk  
import streamlit as st  
import pickle  
import string  
from nltk.corpus import stopwords  
from nltk.stem.porter import PorterStemmer  
  
nltk.download('punkt')  
nltk.download('stopwords')  
  
ps = PorterStemmer()  
stop\_words = set(stopwords.words('english'))  
  
def transform\_text(text):  
 text = text.lower()  
 text = nltk.word\_tokenize(text)  
 text = [i for i in text if i.isalnum()]  
 text = [i for i in text if i not in stop\_words and i not in string.punctuation]  
 text = [ps.stem(i) for i in text]  
 return " ".join(text)  
  
tk = pickle.load(open("vectorizer.pkl", "rb"))  
model = pickle.load(open("model.pkl", "rb"))  
  
st.title("📩 SMS Spam Detection Model")  
st.write("Made with ❤️‍🔥 by Shrudex👨🏻‍💻")  
st.subheader("Enter an SMS below to check if it's Spam or Not 🚀")  
  
st.caption("💡 Try these examples:")  
st.code("Congratulations! You've won a free lottery ticket. Call now!")  
st.code("Hey, are we meeting tomorrow?")  
  
input\_sms = st.text\_input("✍️ Type your message here:")  
  
if st.button("🔍 Predict"):  
 if input\_sms.strip() == "":  
 st.warning("⚠️ Please enter a message before predicting.")  
 else:  
 transformed\_sms = transform\_text(input\_sms)  
 vector\_input = tk.transform([transformed\_sms])  
 result = model.predict(vector\_input)[0]  
 if result == 1:  
 st.error("🚨 This SMS is SPAM")  
 else:  
 st.success("✅ This SMS is NOT SPAM")