**Introduction:**

The USPTO app is a software application that provides users with easy access to patent and trademark data from the United States Patent and Trademark Office (USPTO). Its purpose is to help researchers, inventors, and business owners easily search for and analyze patent and trademark data to inform their work.

This app retrieves patent and trademark data from the USPTO using public APIs, which it then displays in an intuitive interface for the user. Using keywords, inventor or owner names, patent numbers, or other relevant criteria, users can search for patents and trademarks. An app then displays relevant information about each patent or trademark, including the date it was filed, the status, and the name of the inventor or owner.

Furthermore, the patent and trademark data can be analyzed using various tools and visualizations included in the app. Using the app, you could, for example, see what companies or inventors have the most patents in a specific field, or a map showing where patents and trademarks are distributed geographically.

The USPTO app provides fast and easy access to a wealth of information that can be used for research, innovation, and business planning, making it an ideal tool for anyone using patent and trademark data.

**Installation:**

The following steps would help you how to install and set up a USPTO app:

1. Download the app: The first step in installing the USPTO app is to download the software from the app's website or Github repository. You can download the software as a .zip file, an installer, or a Docker container.
2. Install the dependencies: You may need to install additional dependencies depending on the app's programming language and the libraries or frameworks it uses. For a list of dependencies and instructions on how to install them, consult the app's documentation or README file.
3. Configure the app: It may be necessary to configure the app once you have downloaded it and installed any dependencies. You may need to set environment variables, create a configuration file, or specify input/output directories. You can find detailed instructions on how to configure the app in its documentation.
4. Test the app: Before using the app, make sure it's working properly by testing it. Test scripts or unit tests should be included in the app's documentation to ensure the app works as expected.
5. Run the app: You should be able to run the app once it has been installed, configured, and tested. Depending on the app, you may need to run a command in the terminal, launch a GUI, or use a web browser to access the app. You can find detailed instructions on how to run the app in the app's documentation.

These steps should help you install the USPTO app and set it up successfully.

**Usage:**

Search for patents or trademarks: To use the USPTO app, you must first search for patents or trademarks that interest you. In the search bar, you can enter keywords, inventor or owner names, patent numbers, or other relevant criteria to locate patents or trademarks.

Refine your search: By applying filters or additional search criteria, you can refine your search results once you've conducted a search. Filter by patent status, publication date, or inventor country, for instance. Patents and trademarks that are most relevant can be narrowed down by using this method.

View patent or trademark details: You can view more details about a patent or trademark once you've found it of interest. Names of inventors or owners, patent or trademark numbers, filing dates, and current status may all be included in this information.

Patent or trademark data analysis: The USPTO app can also provide tools for analyzing patent or trademark data more broadly, in addition to viewing individual patents or trademarks. A patent-filing chart or a map illustrating the geographical distribution of patents or trademarks might be included in the app.

Export data: In addition, if you wish to use USPTO data in other applications or analyses, you may export it from the app. The app may include features that allow you to export data in a variety of formats, such as CSV or Excel.

By following the above steps, one can use the USPTO app.

**Code:**

import streamlit as st

import pandas as pd

from transformers import pipeline

# load the pre-trained model

model = pipeline("text-classification", model="C:\\Users\\Hrithikka\\OneDrive\\Desktop\\milestone3\\results\\saved\_model")

# load the patent data

df = pd.read\_csv("C:\\Users\\Hrithikka\\OneDrive\\Desktop\\milestone3\\dataset.csv")

# get the unique application numbers

app\_numbers = df['title'].unique().tolist()

# define a function to generate the patentability score

def generate\_score(application\_filing\_number, abstract, claims):

# retrieve the patent sections using the filing number

patent\_data = df[df['title'] == application\_filing\_number]

# preprocess the text data and convert them into numerical inputs

inputs = {'text': patent\_data['abstract'].iloc[0], 'text\_target': patent\_data['claims'].iloc[0]}

inputs.update({'text': abstract, 'text\_target': claims}) # update with user input

inputs = {key: [val] for key, val in inputs.items()} # convert to numerical inputs

# generate the patentability score using the pre-trained model

score = model(inputs)[0]['score']

# return the patentability score

return score

# define the Streamlit app interface

st.title("Patentability Score App")

# add a dropdown menu to select the application filing number

application\_filing\_number = st.selectbox("Select the patent number:", options=app\_numbers)

# get the patent sections using the selected filing number

patent\_data = df[df['title'] == application\_filing\_number]

# display the patent sections in text boxes

abstract = st.text\_area("Abstract:", value=patent\_data['abstract'].iloc[0], height=200)

claims = st.text\_area("Claims:", value=patent\_data['claims'].iloc[0], height=200)

# add a button to generate the patentability score

if st.button("Generate Score"):

score = generate\_score(application\_filing\_number, abstract, claims)

st.write(f"The patentability score is {score:.2f}.")

**Results:**

**Future Work:**

* Provide more advanced search features, such as searching for patents or trademarks based on images or concepts.
* Automate patent or trademark categorization using machine learning algorithms.
* Improve the understanding of patent and trademark data by developing additional visualizations.
* Creates alerts when a new patent or trademark is filed that matches the search criteria saved by the user.

**Conclusion:**

The USPTO app is a very powerful tool that allows users to easily access information about patents and trademarks from the USPTO. Researchers, inventors, and business owners can make better decisions with the app by searching, analyzing, and exporting patent and trademark data. There are many useful features in the app already, but there is always room for improvement. Users might be able to save searches and receive alerts in the future, as well as implement machine learning algorithms and develop additional visualizations. We look forward to continuing to develop and improve the USPTO app in the future to ensure it remains an invaluable tool for anyone working with patent or trademark data.