Capstone\_week3\_lab2\_Task1 and 2 completed # Import required libraries

import pandas as pd

import dash

import dash\_html\_components as html

import dash\_core\_components as dcc

from dash.dependencies import Input, Output

import plotly.express as px

import numpy as np

# Read the airline data into pandas dataframe

spacex\_df = pd.read\_csv("spacex\_launch\_dash.csv")

max\_payload = spacex\_df['Payload Mass (kg)'].max()

min\_payload = spacex\_df['Payload Mass (kg)'].min()

# Create a dash application

app = dash.Dash(\_\_name\_\_)

# Create an app layout

app.layout = html.Div(children=[html.H1('SpaceX Launch Records Dashboard',

                                        style={'textAlign': 'center', 'color': '#503D36',

                                               'font-size': 40}),

                                # TASK 1: Add a dropdown list to enable Launch Site selection

                                # The default select value is for ALL sites

                                # dcc.Dropdown(id='site-dropdown',...)

                                html.Br(),

                                dcc.Dropdown(id='site-dropdown',

                                    options=[

                                        {'label': 'All Sites', 'value': 'ALL'},

                                        {'label': 'CCAFS LC-40', 'value': 'CCAFS LC-40'},

                                        {'label': 'VAFB SLC-4E', 'value': 'VAFB SLC-4E'},

                                        {'label': 'KSC LC-39A', 'value': 'KSC LC-39A'},

                                        {'label': 'CCAFS SLC-40', 'value': 'CCAFS SLC-40'},

                                        ],

                                        value='ALL',

                                        placeholder="Select a Launch Site here",

                                        searchable=True

                                        ),

                                # TASK 2: Add a pie chart to show the total successful launches count for all sites

                                # If a specific launch site was selected, show the Success vs. Failed counts for the site

                                html.Div(dcc.Graph(id='success-pie-chart')),

                                html.Br(),

                                html.P("Payload range (Kg):"),

                                # TASK 3: Add a slider to select payload range

                                #dcc.RangeSlider(id='payload-slider',...)

                                # TASK 4: Add a scatter chart to show the correlation between payload and launch success

                                html.Div(dcc.Graph(id='success-payload-scatter-chart')),

                                ])

# TASK 2:

# Add a callback function for `site-dropdown` as input, `success-pie-chart` as output

# Function decorator to specify function input and output

@app.callback(Output(component\_id='success-pie-chart', component\_property='figure'),

              Input(component\_id='site-dropdown', component\_property='value'))

def get\_pie\_chart(entered\_site):

    filtered\_df = spacex\_df

    if entered\_site == 'ALL':

        fig = px.pie(spacex\_df, values='class',

        names='Launch Site',

        title='Total Success Launces by Site')

        return fig

    else:

        filtered\_df ['size'] = np.zeros(56)

        filtered\_df = spacex\_df[spacex\_df['Launch Site']==entered\_site].groupby(['Launch Site', 'class'], as\_index=False).count().reset\_index()

        fig = px.pie(filtered\_df, values='size',

        names='class',

        title='Total Success Launces for site '+ entered\_site)

        return fig

        # return the outcomes piechart for a selected site

# TASK 4:

# Add a callback function for `site-dropdown` and `payload-slider` as inputs, `success-payload-scatter-chart` as output

# Run the app

if \_\_name\_\_ == '\_\_main\_\_':

    app.run\_server()

Chart, pie chart

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