**🔍 Project Title: Interactive Sales Dashboard Using Plotly.js**

**📁 Project Overview**

This project is a fully interactive, browser-based **Sales Performance Dashboard** built using **HTML**, **JavaScript**, and **Plotly.js**. It enables users to **upload their own sales data in JSON format** and instantly see **insightful visualizations** through various charts.

**📌 Key Features**

* ✅ **Upload your own JSON file**: Just select your sales data file and the dashboard updates automatically.
* 📊 **6 Interactive Charts**:
  1. **Purchase Trends Over Time** – Track purchasing pattern linearly.
  2. **Top Product Categories** – See which categories dominate sales.
  3. **Customer Segmentation: Age vs Spend** – Identify buyer patterns by age and spend.
  4. **Purchase Frequency (Donut Chart)** – Understand how often customers shop.
  5. **Preferred Payment Method** – Discover which methods customers prefer.
  6. **Summer Season Shopping Behavior** – View what sells best in summer.
* 🎛️ **Dynamic Filters**: You can filter data based on **category** and **location** using dropdowns.
* 🧠 **Built for Insights**: Helps marketers, analysts, and business owners get quick visual overviews of customer and sales data.

**⚙️ How It Works**

1. **Built the HTML Structure**
   * Created a clean layout using HTML and CSS Grid.
   * Added an upload input and dropdown filters for **category** and **location**.
2. **Used Plotly.js for Charts**
   * Integrated the latest Plotly.js CDN to build beautiful, responsive charts.
3. **JavaScript Logic**
   * Wrote JavaScript functions to:
     + Load the uploaded JSON file
     + Parse and filter data
     + Generate each chart using Plotly’s charting APIs
4. **Made it Reusable**
   * The dashboard doesn't depend on any backend.
   * You can use it locally or host it online (e.g., GitHub Pages).
   * Just upload a compatible JSON dataset and the charts update instantly.

**🧩 JSON Format Required**

The uploaded file should be a .json array of objects with fields like:

json

CopyEdit

[

{

"Customer ID": 1,

"Age": 30,

"Gender": "Male",

"Item Purchased": "T-Shirt",

"Category": "Clothing",

"Purchase Amount (USD)": 45,

"Location": "Texas",

"Season": "Summer",

...

}

]

**💡 How It Helps**

This dashboard is ideal for:

* 📈 **Sales Teams** – to track product and seasonal trends
* 👥 **Marketers** – for customer segmentation and targeting
* 🧮 **Analysts** – to explore and visualize large datasets instantly
* 📚 **Students/Learners** – a great example of real-world use of Plotly.js and JavaScript