**California Wildfire Prediction Dashboard**

**Overview**

The **California Fire Prediction Dashboard** is an interactive **Power BI visualization** designed to analyze and forecast wildfire trends across the state. Using **historical data (2014-2023)**, the dashboard provides insights into **area burned, financial damages, causes, and seasonal patterns** to help in risk assessment and disaster preparedness.

**Key Features:**

✅ **Yearly Wildfire Analysis** – Tracks fire incidents, financial loss, and affected regions over the past decade.  
✅ **Cause Analysis** – Identifies leading causes, including **human activity, lightning strikes, and drought conditions**.  
✅ **Geospatial Visualization** – Uses **interactive maps** to display wildfire hotspots and high-risk areas.  
✅ **Seasonal Trends & Predictions** – Analyzes fire occurrences by season to anticipate peak wildfire periods.  
✅ **Financial Impact Assessment** – Evaluates the economic damage caused by wildfires, helping policymakers allocate resources effectively.

**Insights & Findings:**

🔥 **2023 was one of the most devastating years**, with **48% more area burned** and **$22 billion+ in financial damages** compared to the 10-year average.  
⚠️ **Human-caused fires remain the most destructive**, resulting in the highest loss of life and property.  
🌿 **Drought and climate conditions significantly contribute to wildfire intensity and spread.**

**Objective & Future Scope:**

This dashboard aims to provide **data-driven insights for better wildfire prevention, response planning, and policy-making**. Future enhancements may include:  
🔹 **Machine learning-based risk prediction** for proactive fire management.  
🔹 **Integration with real-time satellite data** for real-time fire tracking.  
🔹 **Enhanced financial impact modeling** to support disaster relief planning.

This dashboard serves as a **powerful tool for analysts, environmental researchers, and policymakers** to make informed decisions about wildfire management.