DAYANANDA SAGAR COLLEGE OF ENGINEERING

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PROJECT SYNOPSIS

PROJECT focus on Criminology and Public Safety. It leverages Power BI to analyze and visualiz U.S. crime data, helping uncover trends, patterns, and insights that can support decision making in law enforcement and public policy. PROJECT INTRODUCTION This Power BI project focuses on analyzing crime data across the United States to uncover patterns, trends, and hotspots. By visualizing key metrics such as crime types locations, and timeframes, the project helps users gain insights into public safety issues With interactive dashboards and maps, it provides an accessible way to explore complet data and support data-driven decision-making for law enforcement and policy planning PROJECT PROBLEM STATEMENT AND Despite the availability of extensive crime data in the United States, making sense of it	DEPARTMENT	ARTIFICIAL INTELLIGENCE AND MACHINE LEARNING			
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	PROBLEM	Problem Statement:			
CHALLENGES can be difficult due to its volume, complexity, and lack of accessibility. The challenge	STATEMENT AND	Despite the availability of extensive crime data in the United States, making sense of it			
	CHALLENGES	can be difficult due to its volume, complexity, and lack of accessibility. The challenge lies in transforming raw data into meaningful insights that can help identify crime			
lies in transforming raw data into meaningful insights that can help identify crime					
trends, high-risk areas, and the effectiveness of law enforcement efforts. This project		trends, high-risk areas, and the effectiveness of law enforcement efforts. This project			
aims to bridge that gap by using Power BI to analyze, visualize, and present crime data		aims to bridge that gap by using Power BI to analyze, visualize, and present crime data			
in a way that is intuitive and actionable.					
Challenges:		Challenges:			
1. Data Quality and Consistency: Crime data may have missing, inconsistent, or		1. Data Quality and Consistency: Crime data may have missing, inconsistent, or			
outdated entries across states and cities.		outdated entries acro	ess states and cities.		

AIML, DSCE 1

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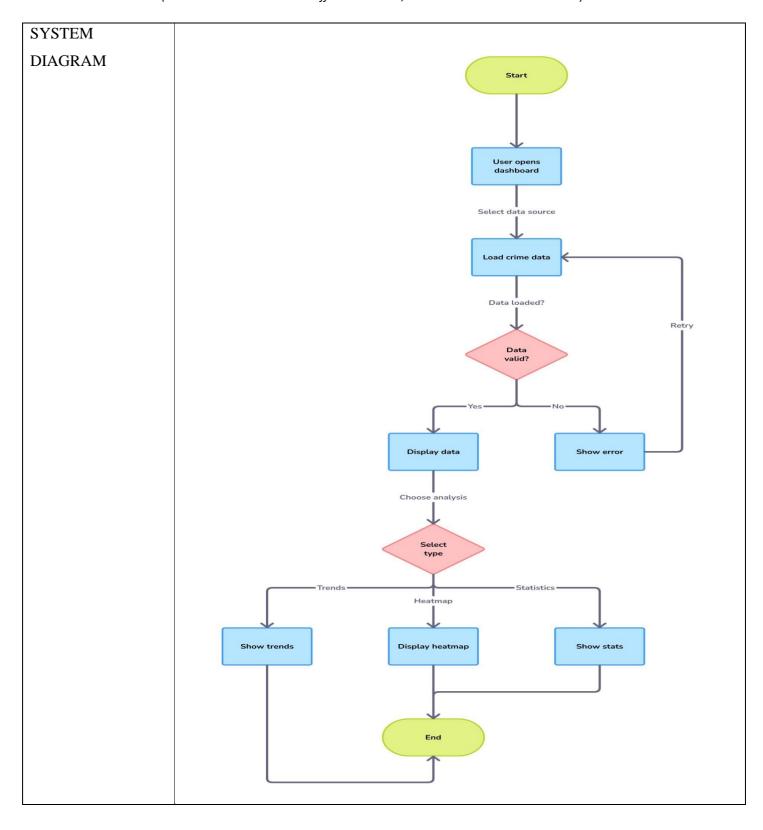
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	 Data Integration: Combining data from multiple sources (e.g., local agencies, FBI databases) can be complex. Granularity and Classification: Crimes are reported at different levels of detail and categories, which can affect uniform analysis. Geospatial Visualization: Mapping crime data accurately across regions requires clean geographic data and proper coordinates. Performance Optimization: Handling large datasets in Power BI may lead to performance issues if not optimized properly. 		
OBJECTIVES OF	The project aims to achieve the following goals:		
THE PROJECT	The project aims to define to the following goals:		
	(i) Identify Crime Trends Over Time: Analyze historical crime data to detect		
	patterns and fluctuations in crime rates across different years, months, and		
	seasons.		
	(ii) Classify and Compare Crime Types: Break down and compare various		
	categories of crimes (e.g., theft, assault, burglary) to understand their		
	frequency and distribution.		
	(iii) Highlight Geographic Hotspots: Use geospatial visualizations to pinpoint		
	high-crime areas at the state, city, or neighborhood level.		
	(iv) Enable Interactive Decision-Making Tools: Develop dynamic dashboards		
	that allow users to filter, explore, and interpret crime data for informed policy and safety planning.		
PROPOSED	The proposed solution for the US Crime Analysis Power BI project involves		
SOLUTION	developing an interactive dashboard that visualizes crime data across various states		
	and cities to identify trends, patterns, and hotspots. By integrating data from sources		
	like the FBI and local law enforcement agencies, the dashboard will provide insights		
	into crime rates by type, location, and time period. Key performance indicators (KPIs),		
	heatmaps, and drill-down capabilities will empower law enforcement, policymakers,		
	and the public to make data-driven decisions for improving safety and allocating		
	resources effectively.		

AIML, DSCE 2

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AIML, DSCE 3