

Week 3 Report

Topic: Exploratory Data Analysis (EDA)

Focus

EDA, Data Understanding, Finding Patterns and Insights

Objective

To analyze and understand the disaster dataset using Exploratory Data Analysis (EDA) techniques in order to identify patterns, trends, and meaningful insights for visualization.

Data Understanding

- Examined dataset structure, features, and attributes.
- Identified key variables such as disaster type, state, year, and impact.
- Verified data consistency and suitability for analysis.

Exploratory Data Analysis (EDA)

- Analyzed distribution of disasters across different states.
- Studied frequency of disaster types and their occurrence patterns.
- Explored relationships between variables to understand risk behavior.

Finding Patterns and Insights

- Identified high-risk states based on disaster frequency.
- Observed yearly trends and peak occurrence periods.
- Generated insights to support dashboard design and risk assessment.

Tools Used

- Python
- Jupyter Notebook
- Pandas
- NumPy

Outcome

- Improved understanding of disaster dataset behavior.
- Identified key patterns and trends.
- Prepared insights for visualization and dashboard development in Power BI.