# Work Breakdown Structure (WBS) Document

## Project Title:

[EDA: A WebApp for Efficient Exploratory Data Analysis]

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## 1.Introduction

The Work Breakdown Structure (WBS) for the project **"EDA: A WebApp for Efficient Exploratory Data Analysis"** provides a detailed hierarchical decomposition of the tasks required to deliver a functional web application that simplifies and automates the process of Exploratory Data Analysis (EDA). This tool is designed to assist data scientists and analysts by offering an intuitive interface and robust features for data exploration, visualization, and pattern identification, ultimately accelerating data-driven decision-making.

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## 2.WBS Overview

### 2.1 Purpose

**The main purpose of this web application is to provide the interactive platform for performing Exploratory Data Analysis (EDA) within less amount of time. This application allows user to upload the CSV file for analysis, summarize, visualization the data with statistical computation without coding skills.**

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## 3.WBS Breakdown

### 3.1 Level 1 – Project Phases

### 1.0 Planning and requirement Gathering

- 1.1 Define project scope and objectives
- 1.2 Define requirements
    - 1.2.1 Define user requirements
    - 1.2.2 Define System requirements
    - 1.2.3 Meet with stakeholder and define user stories
    - 1.2.4 Identify target users
    - 1.2.5 Identify technology stack
- 1.3 Identify Sample Datasets for testing
- 1.4 Project Reporting

- 1.4.1 Weekly project status meetings

- 1.4.2 Prepare milestone reports

- 1.5 risk management and issue tracking

  - 1.5.1 Risk: larger dataset may slow down or crash the web application

  - 1.5.2 Constraint: file size limit file format

  - 1.5.3 Assumption: Internet Speed

## 2.0 Design and Development

- 2.1 UI Design

  - 2.1.1 Design Mockups

  - 2.1.2 Prototyping and userfeedback

- 2.2 Frontend Development

  - 2.2.1 Interface Design/Implement Dashboard layout

  - 2.2.2 Develop CSV file upload component

  - 2.2.3 Create Summary statistics Display

  - 2.2.4 Develop visualization Components

  - 2.2.5 Filters and interacting Controls

- 2.3 Backend Development

  - 2.3.1 Imported libraries for data processing

  - 2.3.2 Implement data processing pipeline

  - 2.3.3 Implement EDA logic

  - 2.3.4 Create Report Generation module

- 2.4 Data processing Visualization

  - 2.4.1 Summary statistics

  - 2.4.2 Outlier Detection and Highlighting

  - 2.4.3 Correlation and features analysis

  - 2.4.4 Data Visualization tools

## 3.0 Testing and Debugging

- 3.1 Unit testing

  - 3.1.1 Frontend testing
  - 3.1.2 Backend testing

- 3.2 Integration testing

- 3.3 User Acceptance Testing

## 4.0 Deployment and Maintenance

- 4.1 Most cloud Infrastructure

## 5.0 Application monitoring and maintenance

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# 4.Assumptions

☐ User's or Organization primarily upload structured data like (CSV) for analysis, for better performance, the internet speed be stable.

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# 5.Conclusion

This WBS provides a structured breakdown of all activities necessary to complete the [EDA: A WebApp for Efficient Exploratory Data Analysis]. It serves as the foundation for scheduling, resource allocation, and risk management, ensuring successful project execution.

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