

Referee Strictness (Placeholder)

Your Name(s)

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1 Introduction

Introduce the problem domain (airplane safety and casualties) and the main goals of the visualization. This section should set the stage for the rest of the report by capturing the main points from the subsequent sections (data source, task, and final solution).

2 The Visualization Task

2.1 Data Abstraction (Lecture 5)

2.1.1 Source and Rationale

Describe where the data was obtained. Justify the choice of this dataset, explicitly **referencing the article where Boeing gutted its engineering department** as a key motivation for the analysis.

2.1.2 Data Content: Attribute Types and Structure

Describe the data values and attribute space.

- **Dependent Variables (Measures):** (e.g., Number of Casualties, Crash Count). Define their **Type** (e.g., *Continuous*, *Discrete*).
- **Independent Variables (Keys):** (e.g., Aircraft Model, Airline, Date/Year). Define their **Type**.
- **Structure:** Define the main data structure (e.g., tabular, relational). Explicitly mention the **Calendar** structure for time-based analysis.

2.1.3 Data Context and Validity

Define the data domain and reference space.

- **Extent of Validity:** Discuss the temporal or spatial scope of the data (e.g., *Point*, *Local*, *Global*).
- **Interpolation:** State whether interpolation is used or why it is not applicable.
- **Topology:** Describe the topology (e.g., spatial coordinates, connectivity) relevant to the data, even if not visualized geographically.

2.2 Task Abstraction (Lecture 5)

2.2.1 Task Goal and Framework

State the main goal of the visualization in concrete terms. Frame the supported tasks using **Shneiderman's Mantra**:

- **Overview:** What initial view gives the general scope?

- **Zoom and Filter:** How can users narrow down the data?
- **Details on Demand:** How are specific strictness details revealed (e.g., via tooltips)?

2.2.2 Task Taxonomy and Polarity

2.2.3 Potato Notation

Provide **Potato Notation** (or a similar clear visual/textual breakdown) for the primary tasks completed in the visualization, ensuring each view supports at least one specific task.

3 Related Work

3.1 Design and Task References

- Reference articles and papers that support the visualization **task**.
- Reference **design references** or existing visualizations that influenced your approach.
- Mention any articles or world events that are highlighted by the data.

3.2 Benchmarking

If you reference other visualizations and claim an improvement, you **must use benchmarking** (Lecture 5 terminology) to justify how your solution is better, especially if the compared visualizations use the same dataset.

4 The Visualization Solution

4.1 Design Evolution and Iterations

Briefly cover **previous design iterations** that were discarded and why (e.g., problems with an initial **Map background**, difficulty handling outliers without a **Log scale**).

4.2 General Layout and First Principles Justification

Describe the overall structure of the interactive visualization. Justify design decisions using **first principles from lectures**.

4.3 Detailed View Analysis and Justification

Go through each major page or view of the visualization.

4.4 Color Choices and Efficiency

5 Use Case

Provide a detailed example case demonstrating how the visualization assists users in supported tasks.

6 Limitations

Acknowledge the shortcomings of the project.

7 Division of Labor

Acknowledge all contributors and their specific roles.

Table 1: Project Contribution Matrix

Task	Contributor 1	Contributor 2	Contributor 3
Visualization Design (drawings/discussion)	X		X
Finding data	X	X	
Data cleaning and prep		X	
Coding the visualization	X	X	X
Fielding feedback		X	X
Completing the report	X		X

8 Bibliography