**A close-up of a document

Description automatically generated**

**Data Analysis – Group Project**

**Group Members:**

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| --- | --- |
| **Group Member Name** | **Group Member X Number** |
| Jason O’Connor | X00191019 |
| Brandon Kelly | X00189349 |
| Nathan Kelly | X00182498 |
| Lee Clark | X00189621 |

**Project Overview:**

1. **Import Data:** Show and Use Python to Import the Dataset
2. **Data Cleaning:** Clean, Pre-Process Dataset with Python
3. **Data Manipulation:** Shae Dataset for Analysis & Visualization
4. **Data Visualization:** Display Data using Plots & Graphs
5. **Hypothesis & Analysis:** Formulate based on Data and do Relevant Statistical Test, Making Interpretations
6. **Advanced Analysis:** Include Linear Regression, Multiple Regression, etc.

**Deliverables:**

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|  | **Deliverables (Submit Via Moodle)** |
| **1.** | Dataset Selection / Collection |
| **2.** | Technical Report: Python Notebook w/ Code |
| **3.** | Report: 2k – 3.5k Words |
| **4.** | Presentation |

**Report Overview:**

1. **Word Count:** Anywhere between 2000 - 3500 Words
2. **Brief Introduction:** Explain the Dataset, Where We Got It From
3. **Problem:** Explain the Problem We Attempt to Solve
4. **Results & Findings:** Explain Findings, Talk about Results w/ Referencing and Outcomes

**Delegation of Tasks:**

**Nathan Kelly:**

1. Data Selection & Collection
2. Data Pre-Processing

**Lee Clarke:**

1. Data Visualization

**Brandon Kelly & Jason O’Connor:**

1. Statistical & Advanced Analysis

Nathan Cleans Data, Comments and Adds to the Report

Then, Lee Makes Graphs and Explains Why in Report

Brandon and I Work on Analysis, Using Graphs, and Add to Report

**Questions for Statistical Analysis**

**Descriptive Statistics:**

1. What is the Mean, Median, and Mode of Number of Passengers before and after the COVID Period?
2. What is the Standard Deviation of the Number of Passengers, did it increase or decrease during the COVID Period?
3. **Completing:** Nathan Kelly

**Trends & Patterns:**

1. How did the Number of Passengers change over the months of COVID Period?
2. Are there any seasonal patterns in the data, did COVID disrupt these usual patterns in any way?
3. **Completing:** Lee Clarke

**Comparative Analysis:**

1. What is the percentage decrease in passenger numbers during COVID Period compared to the previous year?
2. How do the passenger numbers vary across different airports and airlines? Did some experience a more significant impact than others?
3. **Completing:** Brandon Kelly

**Economic Impact:**

1. What is the correlation between the decline in passenger numbers and the economic impact on the country?
2. How did the changes in passenger numbers affect the financial performance of the airlines?
3. **Completing:** Jason O’Connor

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| **Student Name:** Nathan Kelly | **Student Num:** X00182498 |

**Task:**

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| **Student Name:** Lee Clarke | **Student Num:** X00189621 |

**Task:**

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| **Student Name:** Brandon Kelly | **Student Num:** X00189349 |

**Task:**

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| **Student Name:** Jason O’Connor | **Student Num:** X00191019 |

**Task:**