Project Plan

<Project Name>

s5273814 - Nathanael Gazzard

s5309988 - Stephen Urquhart

s5318167 - Jahanzaib

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# Introduction

## Background

The goal of this project is the development of a data analysis and visualization tool (DAVT) specifically for the analysis and visualisation of a dataset of ~400k New York Restaurant inspection Results hosted on kaggle.

## Scope

This project will produce a DAVT with a graphical user interface (GUI) that the user will perform both data analysis and data visualisation tasks with. The tasks they can perform will be limited to the following set:

1. The user can retrieve all inspection details for a specified period.

2. The user can plot violations distributed on a per-suburb basis.

3. The user can retrieve all violations containing a specified keyword for a specified period.

4. The user can map violations pertaining to animals distributed over time and suburbs.

5. [insert task here]

## Document contents

This document contains an introduction to the problem space, the objective of this project and a breakdown of all the tasks required for the completion of this project, detailed in the form of a Work Breakdown Structure, Activity Definition and Estimation and a Gantt chart.

*Include some background information about the problem, the scope and what this document will contain.*

# Work Breakdown Structure

*This section should include the work breakdown structure for the whole project. The elements from the WBS should be used to generate your activity definition and those activities should then be scheduled in the Gantt Chart. Remember to consider ALL project activities – anything you do or will need to do should be included in the WBS*

*WBS’s are usually presented as some kind of hierarchical diagram/chart etc. The details what is involved each work unit should be provided in section 3:* ***Activity Definition***

*You do NOT need to do a WBS Dictionary for this project – the activity definition (whilst slightly different) will suffice. The WBS is focussed on SCOPE. The Activity definition is focussed on TIME.*

**Project: Data Analysis and Visualization Tool for New York Restaurant Inspection Results**

***Deliverable:*** *Functional Data Analysis and Visualization Tool*

1. **Project Initiation and Planning**
   1. Software Configuration Management (SCM)
   2. Version Control Systems (VCS)
   3. High-Level Requirements and Scope Definition
   4. Project Team Formation
   5. Requirements
   6. Planning
   7. Set Project Team
   8. Initiate team meetings
   9. Develop Project Plan
   10. Request Approval
   11. Risk Management Analysis
   12. Evaluation and recommendation
   13. Develop Project Chart
   14. Develop Scope
   15. Identify Stakeholders
   16. External/Internal communication
   17. Time
   18. Sponsor reviews project chart
   19. Project Chart Approved
2. **Requirements Analysis and Design**
   1. Detailed User Requirements
   2. Use Case Identification and Prioritization
   3. User Interface Design and Wireframes
   4. Design Hardware & Software
   5. Validation and verification
   6. Designs Approved
3. **Tool Development**
   1. GUI Development
   2. Backend API Development
   3. Database Implementation
4. **Testing and Quality Assurance**
   1. Unit Testing of GUI and APIs
   2. Integration Testing of Components
   3. User Acceptance Testing (UAT)
   4. Validation and verification
   5. User Feedback
   6. Approved
5. **Implementation**
   1. Facility construction
   2. Installation
   3. Beta Testing
6. **Delivery**

~~Turn Over~~

* 1. Staff Training

~~User Manual~~

* 1. Support

~~Maintenance~~

~~Updates~~

~~Fixtures~~

# Activity Definition & Estimation

*From your WBS, define the activities required for your project. You will revise this document and add more detail for part B as you discover more about the project.*

*Each activity should be clearly identified by a number and should match up to your Gantt chart. You should provide some estimations for the time you think each activity will take. This should make it easy to prepare your Gantt chart.*

|  |  |  |  |
| --- | --- | --- | --- |
| *Id* | *Name* | *Description* | *Estimated Duration* |
| **1.0 Project Initiation & Planning** | |  |  |
| *1.1* | Software Configuration Management (SCM) | *Define and implement a process for managing software configurations.* | *2* |
| *1.2* | Version Control Systems (VCS) | *Set up a Version Control System (e.g., GitHub) for source code management* | *1* |
| *1.3* | High-Level Requirements and Scope Definition | 1. *Gather high-level requirements.* 2. *Define and document the scope of the project.* | *3* |
| *1.4* | Project Team Formation | 1. *Identify roles and responsibilities for project team members.* 2. *Assemble the project team.* | *2* |
| *1.5* | Requirements Planning | 1. *Plan the requirements gathering process.* 2. *Identify stakeholders and users to be involved* | *1* |
| *1.6* | Set Project Team | 1. *Assign specific roles and responsibilities to each team member.* 2. *Ensure everyone is clear on their tasks.* | *1* |
| *1.7* | Initiate Team Meetings | *Schedule and hold initial team meetings to discuss project goals and expectations.* | *Ongoing* |
| *1.8* | Develop Project Plan | *Create a detailed project plan outlining tasks, dependencies, and timelines.* | *4* |
| *1.9* | Request Approval | *Present the project plan to stakeholders for approval* | *1* |
| *1.10* | Risk Management Analysis | 1. *Identify potential project risks and their impacts.* 2. *Develop strategies to mitigate or manage risks.* | *2* |
| *1.11* | Evaluation and Recommendation | 1. *Evaluate potential tools, technologies, and methodologies for the project.* 2. *Make recommendations based on evaluations.* | *3* |
| *1.12* | Develop Project Chart | *Create a visual representation of the project's timeline and milestones.* | *1* |
| *1.13* | Develop Scope | 1. *Further define and clarify the project scope.* 2. *Ensure alignment with stakeholder expectations.* | *2* |
| *1.14* | Identify Stakeholders | 1. *List all individuals, groups, or organizations affected by the project.* 2. *Determine their roles and influence on the project.* | *1* |
| *1.15* | External/Internal Communication | 1. *Establish a communication plan for stakeholders and team members.* 2. *Determine frequency, channels, and content of communication.* | *Ongoing* |
| *1.16* | Time Management | 1. *Plan and allocate time for each project phase & task.* 2. *Develop a project schedule.* | *2* |
| *1.17* | Sponsor Reviews Project Chart | *Present the project chart to the sponsor for review/feedback* | *1* |
| *1.18* | Project Chart Approved | *Obtain sponsor approval for the project chart and plan* | *1* |
| **2.0 Requirements Analysis & Design** | |  |  |
| *2.1* | Detailed User Requirements | 1. *Conduct interviews/surveys to gather detailed user requirements.* 2. *Create user stories and use cases.* | *4* |
| *2.2* | Use Case Identification and Prioritization | 1. *Identify key use cases for the tool based on user requirements.* 2. *Prioritize use cases based on their importance and impact.* | *2* |
| *2.3* | User Interface Design and Wireframes | 1. *Design the graphical user interface (GUI) for the tool.* 2. *Create wireframes to visualize layout and interactions.* | *3* |
| *2.4* | Design Hardware & Software | 1. *Define the hardware & software architecture for the tool.* 2. *Identify technology stacks, frameworks, and libraries.* | *2* |
| *2.5* | Validation and Verification | 1. *Review and validate the design against user requirements.* 2. *Verify that the design aligns with project goals.* | *2* |
| *2.6* | Designs Approved | *Obtain stakeholder approval for the user interface and software architecture* | *1* |
| **3.0 Tool Development** | |  |  |
| *3.1* | GUI Development | 1. *Develop the graphical user interface.* 2. *Implement period selection/plotting/search/analysis interfaces.* | *6* |
| *3.2* | Backend API Development | 1. *Design and implement APIs to handle data retrieval and processing.* 2. *Develop APIs for inspection details, violation distribution, keyword search, and animal-related analysis.* | *8* |
| *3.3* | Database Implementation | 1. *Set up the database schema for storing inspection data.* 2. *Implement CRUD (Create, Read, Update, Delete) operations.* | *4* |
| **4.0 Testing and Quality Assurance** | |  |  |
| *4.1* | Unit Testing of GUI and APIs | 1. *Develop and execute unit tests for GUI components and APIs.* 2. *Ensure individual components function as intended.* | *3* |
| *4.2* | Integration Testing of Components | 1. *Test the integration between GUI, APIs, and database.* 2. *Validate that components work together seamlessly.* | *4* |
| *4.3* | User Acceptance Testing (UAT) | 1. *Collaborate with users to perform UAT on the tool.* 2. *Address feedback and ensure user satisfaction.* | *6* |
| *4.4* | Validation and Verification | 1. *Review and validate the developed tool against requirements.* 2. *Verify that the tool meets user needs and expectations.* | *3* |
| *4.5* | User Feedback | 1. *Gather user feedback during UAT and testing phases* 2. *Incorporate feedback to improve the tool.* | *Ongoing* |
| *4.6* | Approved | 1. *Obtain stakeholder and user approval for the tested and refined tool* 2. *Ensure the tool is ready for deployment.* | *2* |
| **5.0 Implementation** | |  |  |
| *5.1* | Facility Construction | 1. *Setup the required infrastructure and environment for tool deployment* 2. *Ensure the necessary hardware, software, and resources are in place* | *???* |
| *5.2* | Installation | 1. Hardware Setup and Assembly 2. Network Configuration and Integration 3. Equipment Calibration and Testing | *???* |
| *5.3* | Beta Testing | 1. Unit Testing of Components 2. Integration Testing 3. Performance Testing 4. Quality Control and Defect Resolution | *???* |
| **6.0 Delivery** | |  |  |
| *6.1* | Staff Training | 1. End-User Training 2. Technical Documentation Creation 3. User Manuals and Guides. 4. Training Materials Preparation | *???* |
| *6.2* | Support | 1. System Monitoring and Troubleshooting Setup. 2. User Support Setup. 3. Knowledge Transfer and Documentation Handover 4. Final Stakeholder Review and Approval | *???* |
| *6.3* |  |  |  |
| *6.4* |  |  |  |
| *6.5* |  |  |  |
| *6.6* |  |  |  |
| *6.7* |  |  |  |

**Project Initiation and Planning**

1.1 Software Configuration Management (SCM)

1. *Define and implement a process for managing software configurations.*
2. *Estimated Duration: 2 units (of measurement (days/weeks)*

1.2 Version Control Systems (VCS)

1. *Set up a Version Control System (e.g., GitHub) for source code management.*
2. *Estimated Duration: 1 units*

1.3 High-Level Requirements and Scope Definition

1. *Gather high-level requirements.*
2. *Define and document the scope of the project.*
3. *Estimated Duration: 3 units*

1.4 Project Team Formation

1. *Identify roles and responsibilities for project team members.*
2. *Assemble the project team.*
3. *Estimated Duration: 2 units*

1.5 Requirements Planning

1. *Plan the requirements gathering process.*
2. *Identify stakeholders and users to be involved???*
3. *Estimated Duration: 1 units*

1.6 Set Project Team

1. *Assign specific roles and responsibilities to each team member.*
2. *Ensure everyone is clear on their tasks.*
3. *Estimated Duration: 1 units*

1.7 Initiate Team Meetings

1. *Schedule and hold initial team meetings to discuss project goals and expectations.*
2. *Estimated Duration: Ongoing throughout the project*

1.8 Develop Project Plan

1. *Create a detailed project plan outlining tasks, dependencies, and timelines.*
2. *Estimated Duration: 4 units*

1.9 Request Approval

1. *Present the project plan to stakeholders for approval???*
2. *Estimated Duration: 1 units*

1.10 Risk Management Analysis

1. *Identify potential project risks and their impacts.*
2. *Develop strategies to mitigate or manage risks.*
3. *Estimated Duration: 2 units*

1.11 Evaluation and Recommendation

1. *Evaluate potential tools, technologies, and methodologies for the project.*
2. *Make recommendations based on evaluations.*
3. *Estimated Duration: 3 units*

1.12 Develop Project Chart

1. *Create a visual representation of the project's timeline and milestones.*
2. *Estimated Duration: 1 units*

1.13 Develop Scope

1. *Further define and clarify the project scope.*
2. *Ensure alignment with stakeholder expectations.*
3. *Estimated Duration: 2 units*

1.14 Identify Stakeholders

1. *List all individuals, groups, or organizations affected by the project.*
2. *Determine their roles and influence on the project.*
3. *Estimated Duration: 1 units*

1.15 External/Internal Communication

1. *Establish a communication plan for stakeholders and team members???*
2. *Determine frequency, channels, and content of communication.*
3. *Estimated Duration: Ongoing throughout project*

1.16 Time Management

1. *Plan and allocate time for each project phase & task.*
2. *Develop a project schedule.*
3. *Estimated Duration: 2 units*

1.17 Sponsor Reviews Project Chart

1. *Present the project chart to the sponsor for review/feedback???*
2. *Estimated Duration: 1 units*

1.18 Project Chart Approved

1. *Obtain sponsor approval for the project chart and plan???*
2. *Estimated Duration: 1 units*

**Requirements Analysis and Design**

2.1 Detailed User Requirements

1. *Conduct interviews/surveys to gather detailed user requirements.*
2. *Create user stories and use cases.*
3. *Estimated Duration: 4 units*

2.2 Use Case Identification and Prioritization

1. *Identify key use cases for the tool based on user requirements.*
2. *Prioritize use cases based on their importance and impact.*
3. *Estimated Duration: 2 units*

2.3 User Interface Design and Wireframes

1. *Design the graphical user interface (GUI) for the tool.*
2. *Create wireframes to visualize layout and interactions.*
3. *Estimated Duration: 3 units*

2.4 Design Hardware & Software

1. *Define the hardware & software architecture for the tool.*
2. *Identify technology stacks, frameworks, and libraries.*
3. *Estimated Duration: 2 units*

2.5 Validation and Verification

1. *Review and validate the design against user requirements.*
2. *Verify that the design aligns with project goals.*
3. *Estimated Duration: 2 units*

2.6 Designs Approved

1. *Obtain stakeholder approval for the user interface and software architecture???*
2. *Estimated Duration: 1 units*

**Tool Development**

* 1. GUI Development

1. *Develop the graphical user interface.*
2. *Implement period selection/plotting/search/analysis interfaces.*
3. *Estimated Duration: 6 units*

3.2 Backend API Development

1. *Design and implement APIs to handle data retrieval and processing.*
2. *Develop APIs for inspection details, violation distribution, keyword search, and animal-related analysis.*
3. *Estimated Duration: 8 units*

3.3 Database Implementation

1. *Set up the database schema for storing inspection data.*
2. *Implement CRUD (Create, Read, Update, Delete) operations.*
3. *Estimated Duration: 4 units*

**Testing and Quality Assurance**

4.1 Unit Testing of GUI and APIs

1. *Develop and execute unit tests for GUI components and APIs.*
2. *Ensure individual components function as intended.*
3. *Estimated Duration: 3 units*

4.2 Integration Testing of Components

1. *Test the integration between GUI, APIs, and database.*
2. *Validate that components work together seamlessly.*
3. *Estimated Duration: 4 units*

4.3 User Acceptance Testing (UAT)

1. *Collaborate with users to perform UAT on the tool.*
2. *Address feedback and ensure user satisfaction.*
3. *Estimated Duration: 6 units*

4.4 Validation and Verification

1. *Review and validate the developed tool against requirements.*
2. *Verify that the tool meets user needs and expectations.*
3. *Estimated Duration: 3 units*

4.5 User Feedback

1. *Gather user feedback during UAT and testing phases???*
2. *Incorporate feedback to improve the tool.*
3. *Estimated Duration: Ongoing throughout testing*

4.6 Approved

1. *Obtain stakeholder and user approval for the tested and refined tool???*
2. *Ensure the tool is ready for deployment.*
3. *Estimated Duration: 2 weeks*

**Implementation**

5.1 Facility Construction

1. *Setup the required infrastructure and environment for tool deployment???*
2. *Ensure the necessary hardware, software, and resources are in place???*
3. *Estimated Duration:*

# Gantt Chart

*This section should contain your Gantt chart. The items in the Gantt chart should match the activity definition from section 3. You should also submit your Gantt chart file separately.*