

**IFN701 Project 1 – Project Plan**

**Symptoms Of Lower Back Pain: A Data Analysis Project**

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**1.0: Introduction**

Background: Data analysis gaining ground these days

Used in distinct fields

Lower back pain data analysis new practice to understand the symptoms of this problem

Here defines the value of data analysis

Introduction of this project dataset:

310 observations

Contains 12 attributes

out of scope:

* 1. **Motivation:**
  2. **Deliverables:**

Data analysis report

Rmarkdown in ( HTML , PDF format)

Contains : data visualization

Prediction model, decision tree data set

* 1. **Project Scope:**

Analyse the dataset in R programming

Inquire the data set

relationships between different various given symptoms

create meaningful data visualization that reveals hidden pattern

prediction model (descision tree, heat map)

**2.0: Project methodology:**

These are the seven steps are necessary that should be implemented to achieve the target deliverables of this project.

**3.0: Project Management Approach:**

In order to manage this project, Dynamic systems development method (DSDM) will be applied. Basically, it is an agile framework that not only aids in on time delivery of project but also easy to maintain. The iterative, continuous incremental delivery, and collaboration are the vital principles of DSDM project management. Moreover, DSDM proliferates the opportunities to receive feedback from the Supervisor. As a result, it effectively caters requirements of on project/ business that are indispensable for the quality and control management. The DSDM Agile Project Framework (2014 Onwards)(n.d.). In Addition, the eight principles are considered as the foundation of this methodology that makes it more suitable for this project. Those are:

* Focus on business needs
* On time delivery
* Cooperation in teams
* Build incrementally
* Communicate constantly
* Quality assurance
* Iterative development
* Transparency in work

**Summary Table:**

|  |  |
| --- | --- |
| Timeline | 13 weeks |
| Number of Increments | 3 (1 month each) |
| Number of Timeboxes | 6 (2 weeks each) |
| Time-period of each time box | 5 days |

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Kick off | Close out | Planned activities | Outcome | |
| *Increment 1* | | | | |
| Timebox 1 | | | | |
| Week 1 | | Arrange meeting with supervisor and project discussion | | * Installation of Rstudio * Download the Dataset * Join Slack group |
| Week 2 | | Sign off the project agreement | | * Agreement Submission * Repository on GitHub |
| Timebox 2 | | | | |
| Week 3 | | Prepare project presentation | | * Project proposal pitch |
| Week 3 | Week 4 | Work on Project Proposal | | * Proposal submission |
| *Increment 2* | | | | |
| Timebox 3 | | | | |
| Week 5 | | Dataset acquisition | |  |
| Week 6 | | Data exploration | |  |
| Timebox 4 | | | | |
| Week 7 | | Data visualization | | * Rmarkdown |
| Week 8 | | Prediction modelling | | * Rmarkdown |
| *Increment 3* | | | | |
| Timebox 5 | | | | |
| Week 9 | | Registration for week 12 presentation | | * upload slides on GitHub |
| Week 10 | | **Mid Semester break** | |  |
| Timebox 6 | | | | |
| Week 11 | | Documentation of data analysis, prepare project plan presentation | | * Data Analysis report * Project plan presentation |
| Week 12 | week 13 | Work on final report | | * Final report submission |

**4.0: Communication Plan:**

The communication plan consists detailed information that is vital for people, who are engaged in this project. It elaborates in terms of classification, purpose, methodology, frequency, deliverables, and participants. The details for communication plan are given below:

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Classification | Purpose | Method | frequency | Deliverables | Participants |
| Weekly meeting | Thorough appraisal of current timebox and planning for next timebox | Face to face | Once a week | * Log sheet | * Academic supervisor * Student |
| Notifications | Information about mandatory ToDos, clarification of doubts. Also, receive help from supervisor | Slack | Casual | * Records of continuous communication on slack | * Academic supervisor * Student |
| Communicate through E-mail | To deal with unexpected problem | Email | Frequent, rely on problem |  | * Academic supervisor * Student |
| Review session | Report errors and get feedback for  Required  improvements | Face to face | After termination of each increment |  | * Academic supervisor * Student |

**5.0: Risk Assessment:**

This section comprises all the potential risks that may occur during the life cycle of the project, which can influence the delivery of the project. The key risks are classified according to ranking of (High, medium and low). Basically, assessment of these risks not only stimulates the on-time delivery of project but also hike the overall workflow efficiencies. The Mitigation strategies aids in how to addresses the certain risk. The main risks are shown below:

|  |  |  |
| --- | --- | --- |
| **Risk Ranking (High, Medium, Low)** | **Risk Description and Impact** | **Mitigation Strategy and/or Contingency Plan** |
| **Medium** | Unavailability of Supervisor may lead to insufficient guidance | Set-up alternatives for communication likewise Slack or video conferencing. |
| **Medium** | Deliverables are not what exactly academic supervisor wants. Thus, it increases the likelihood to deliver the wrong solution. | Deliver the partial solution in small manageable parts. |
| **High** | As communication act an essential element in project management. Consequently, shortage of communicating plans can result in arguments. | Effective communication plan like weekly meeting, minutes meeting etc. |
| **Low** | Project goes beyond the set time limit (13 weeks) can affect the on-time completion of project | Project plan must be followed strictly and occurrence of issue needs to be resolved as soon as possible |

**References:**

The DSDM Agile Project Framework (2014 Onwards)(n.d.). Agile Business Consortium Retrieved from https://www.agilebusiness.org/content/principles