

4.1 PROJECT PLAN AND PROJECT EFFORT BASED ON RESOURCES

4.1.1 Project Plan :

Project Name:

Crime Detection using Data Mining and Machine Learning

Project Members:

1. V. Abhijit : RA2011026020020
2. Sravan K.V. : RA2011026020051
3. Chanikya CH : RA2011026020053

The following budget is set according to the requirements:

Resource Requirement	Cost
Computer with CPU >= Windows 10	Rs. 28,990
Python Software	Free
File	Rs. 20
Printing	Rs. 300
Jupyter Notebook	Free
Flask	Free
Total	Rs.29310

Modules:

1. Police Authentication (Login)
2. Graphs and Plots of Crime w.r.t Time
3. K-Means Algorithm (Machine Learning)
4. Geospatial Plotting
5. SQL Commands

Scheduling:

Task	Start Date	End Date
Business Case Development	23 rd March 2022	30 th March 2022

Identify Stakeholders, Process Models and Required Modules	31 st March 2022	7 th April 2022
Identify Requirements	8 th April 2022	15 th April 2022
Setting Cost Estimates and Budget	16 th April 2022	22 nd April 2022
Coding	23 rd April 2022	1 st July 2022
UML Diagrams	2 nd July 2022	10 th July 2022
Final Revisions	10 th July 2022	12 th July 2022

Software and Hardware Requirements for the Project:

1. 7th Gen or above CPU
2. Monitor
3. Windows 10 or higher OS
4. System must be connected to an Internet Server
5. Python Programming Language
6. Jupyter Notebook IDE
7. Data Science Libraries such as Pandas, Scikit-Learn, etc.
8. Geospatial Plotting Libraries such as GMPlot, etc.
9. Flask w/ HTML

4.1.2 Identify Job Roles and Responsibilities :

Member	Roles and Responsibilities
V. Abhijit RA2011026020020	<ul style="list-style-type: none"> • Team leader: Has the responsibility of coordinating the team, checking in for updates and guiding the team for efficient and successful completion of the project • Team Member: Has the responsibility of contributing to the documentation • Technical Lead: Has responsibility for overall success of the project.

	<ul style="list-style-type: none"> • ML Scientist: Has the responsibility to use Machine Learning Algorithms for proper effect.
Sravan K.V. RA2011026020051	<ul style="list-style-type: none"> • Team Member: Has the responsibility of contributing to the documentation • Developer: Has the responsibility of coding all graphs and plots that show relationships between Crime in relation to Time. • Tester: Has the responsibility to check if the actual result is matching with expected result.
Chanikya CH RA2011026020020	<ul style="list-style-type: none"> • Team Member: Has the responsibility of contributing to the documentation. • Developer: Has the responsibility of coding Front-end with Flask and HTML. • Web Developer: Has the responsibility of designing the website and interfacing with the server.

4.1.3 JOB ROLES AND RESPONSIBILITIES:

1. **PROJECT SPONSOR:** Project sponsor is the one who provides the financial support for the whole project development and execution. They also monitor the process and clarifies scope questions. They also provide expert judgement and dictate milestones, key events, or the project end date.
2. **SUBJECT MATTER EXPERTS (SME):** SME is a person who has a special skills or knowledge on particular job or topic. They have a deep understanding of particular process, function or machine and hence they help to solve the technical challenges faced by the project.

3. PRODUCT OWNER: A Product Owner in the Scrum Framework is the single person who is responsible for the success of a Product and for maximizing the value of that Product. In the Scrum Framework, a few of the Product Owners' responsibilities are described, such as Product Backlog management, maximizing value and stakeholder management.
4. PROJECT MANAGER (PM): A project manager is a professional in the field of project management. Project managers have the responsibility of the planning, procurement and execution of a project, in any undertaking that has a defined scope, defined start and a defined finish; regardless of industry.
5. TECHNICAL LEAD: This person is responsible for overall planning, execution and success of overall complex software solutions to meet customers needs. They have to implement best practice and coding standards to the project. They have to manage the technical scope of the project during and after the delivery.
6. SOFTWARE DEVELOPERS: Individual who builds and creates an application is called software developers. They write , debug and then execute the source code of the software application. They are also called as programmers since they are the ones that create the programs or the source code.
7. SOFTWARE TESTERS: Their main role is to check if the actual result match the expected result and to ensure the software system is defect free. Software testing helps to identify the errors or the missing requirements due to which it becomes a vital role. It can be either manually or by using automated tools.
8. USER ACCEPTANCE TESTERS: This testing is performed by end user or client to accept the software system before moving the software application to the moving environment. This is usually the last process involved in the project management.