

## Project Planning Phase Milestone and Activity List

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| Date         | 22 October 2022  |
| Team ID      | PNT2022TMID01103   |
| Project Name | Project-Early detection of forest fire using deep learning |

## MILESTONE LIST:

| Name                      | Milestone Number | Description   | Mandatory | Optional |
|---------------------------|------------------|---|-----------|----------|
| Project Objectives        | M-001            | We will be able to learn to prepare dataset, image processing, working with CNN layers, read images using OpenCV and CNN for computer vision AI   | Yes       | -        |
| Project Flow              | M-002            | A project management process flowchart is a graphical aid, designed to visualize the sequence of steps to be followed throughout the project management process                         | Yes       |          |
| Pre-Requisites            | M-003            | To complete this project we should have known following project such as Keras, Tensorflow, Python , Anaconda, OpenCV, Flask, Scikit-learn etc...  | Yes       |          |
| Prior Knowledge           | M-004            | One should have knowledge on the Supervised Learning ,CNN and Regression Classification and Clustering, ANN   | Yes       |          |
| Data collection           | M-005            | We can collect dataset from different open sources like kaggle.com, UCI machine learning etc  | Yes       |          |
| Image Preprocessing       | M-006            | Importing the ImageDataGenerator libraries, Define Parameters/Arguments for ImageDataGenerator class, Applying Image Data Generator Functionality to trainset and testset               | Yes       |          |
| Model Building            | M-007            | Importing the model building libraries, Initializing the model, Adding CNN layers, Adding Dense layers, Configuring the learning Process ,Train the model, Save the model, Predictions. | Yes       |          |
| Video Analysis            | M-008            | Open cv for video processing, creating an account in twilio service and Sending alert messages.   | Yes       |          |
| Train CNN model           | M-009            | Register for IBM Cloud and train Image Classification Model   | Yes       |          |
| Ideation Phase            | M-010            | Prepare Literature Survey on the selected Project and Information Gathering, empathy map and ideation   | Yes       |          |
| Project Design Phase-I    | M-011            | Prepare Proposed solution , problem-solution fit and Solution Architecture  | Yes       |          |
| Project Design Phase-II   | M-012            | Prepare Customer journey ,functional requirements, Data flow diagram and Technology Architecture  | Yes       |          |
| Project Planning Phase    | M-013            | Prepare Milestone list , Activity list and Sprint Delivery Plan   | Yes       |          |
| Project Development Phase | M-014            | Project Development delivery of Sprint 1, Sprint 2, Sprint 3, Sprint 4  | Yes       |          |

## ACTIVITY LIST:

| Activity Number | Activity Name               | Detailed Activity Description  | Task Assigned | Status    |
|-----------------|-----------------------------|--|---------------|-----------|
| 1.1             | Access Resources            | Access the resources (courses) in project dashboard.   | All Members   | COMPLETED |
| 1.2             | Rocket chat registration    | Join the mentoring channel via platform& rocket-chat mobile app.   | All Members   | COMPLETED |
| 1.3             | Access workspace            | Access the guided project workspace.   | All Members   | COMPLETED |
| 1.4             | IBM Cloud registration      | Register on IBM Academic Initiative &Apply Feature code for IBM Cloud Credits.                                 | All Members   | COMPLETED |
| 1.5             | Project Repository Creation | Create GitHub account & collaborate with Project Repository in project workspace.                              | All Members   | COMPLETED |
| 1.6             | Environment Setup           | Set-up the Laptop / Computers based on the pre-requisites for each technology track.                           | All Members   | COMPLETED |
| 2.1             | Literature survey           | Literature survey on the selected project & Information Gathering.   | All Members   | COMPLETED |
| 2.2             | Technology Training         | Attend the technology trainings as per the training Calendar.  | All Members   | COMPLETED |
| 2.3             | Empathy Map                 | Prepare Empathy Map Canvas to capture the user Pains & Gains, Prepare list of problem statements               | All Members   | COMPLETED |
| 2.4             | Technology Training         | Attend the technology trainings as per the training Calendar.  | All Members   | COMPLETED |
| 2.5             | Brainstorming               | List the ideas (at least 4 per each team member) by organizing the brainstorm session and prioritize the ideas | All Members   | COMPLETED |

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| <b>2.6</b> | Technology Training                            | Attend the technology trainings as per the training Calendar.   | All Members | COMPLETED   |
| <b>3.1</b> | Proposed Solution Document                     | Prepare the proposed solution document, which includes the novelty, feasibility of idea, business model, social impact, scalability of solution, etc. | All Members | COMPLETED   |
| <b>3.2</b> | Technology Training                            | Attend the technology trainings as per the training Calendar.   | All Members | COMPLETED   |
| <b>3.3</b> | Problem - Solution fit & Solution Architecture | Prepare problem - solution fit document& Solution Architecture.   | All Members | COMPLETED   |
| <b>3.4</b> | Technology Training                            | Attend the technology trainings as per the training Calendar.   | All Members | COMPLETED   |
| <b>4.1</b> | Customer Journey Map                           | Prepare the customer journey maps to understand the user interactions & experiences with the application (entry to exit).                             | All Members | COMPLETED   |
| <b>4.2</b> | Technology Training                            | Attend the technology trainings as per the training Calendar.   | All Members | COMPLETED   |
| <b>4.3</b> | Functional Requirements & Data Flow Diagrams   | Prepare the Functional Requirement Document & Data Flow Diagrams.   | All Members | COMPLETED   |
| <b>4.4</b> | Technology Architecture                        | Prepare Technology Architecture of the solution.  | All Members | COMPLETED   |
| <b>4.5</b> | Technology Training                            | Attend the technology trainings as per the training Calendar.   | All Members | COMPLETED   |
| <b>5.1</b> | Milestone& Activity List                       | Prepare Milestone & Activity List.  | All Members | COMPLETED   |
| <b>5.2</b> | Sprint Delivery Plan                           | Prepare Sprint Delivery Plan.   | All Members | IN PROGRESS |

|            |                     |   |             |             |
|------------|---------------------|---|-------------|-------------|
| <b>6</b>   | Data Collection     | Collect datasets from different open sources like kaggle.com, data.gov, UCI machine learning repository, etc. | All Members | COMPLETED   |
| <b>7.1</b> | Image Preprocessing | Importing the ImageDataGenerator Library  | All Members | IN PROGRESS |
| <b>7.2</b> | Image Preprocessing | Define the parameters/arguments for ImageDataGenerator class.   | All Members | IN PROGRESS |
| <b>7.3</b> | Image Preprocessing | Applying ImageDataGenerator functionality to trainset and test set.   | All Members | IN PROGRESS |
| <b>8.1</b> | Model Building      | Importing the model building libraries.   | All Members | IN PROGRESS |

|             |                        |  |             |             |
|-------------|------------------------|--|-------------|-------------|
| <b>8.2</b>  | Model Building         | Initializing the model.                | All Members | IN PROGRESS |
| <b>8.3</b>  | Model Building         | Adding CNN Layers.                     | All Members | IN PROGRESS |
| <b>8.4</b>  | Model Building         | Adding Dense Layers                    | All Members | IN PROGRESS |
| <b>8.5</b>  | Model Building         | Configuring the learning process       | All Members | IN PROGRESS |
| <b>8.6</b>  | Model Building         | Training the Model                     | All Members | IN PROGRESS |
| <b>8.7</b>  | Model Building         | Save the model                         | All Members | IN PROGRESS |
| <b>8.8</b>  | Model Building         | Predictions                            | All Members | IN PROGRESS |
| <b>9.1</b>  | Video Analysis         | OpenCV for video processing.           | All Members | IN PROGRESS |
| <b>9.2</b>  | Video Analysis         | Creating an account in Twilio service. | All Members | IN PROGRESS |
| <b>9.3</b>  | Video Analysis         | Sending alert message.                 | All Members | IN PROGRESS |
| <b>10.1</b> | Train CNN Model on IBM | Register for IBM Cloud                 | All Members | IN PROGRESS |
| <b>10.2</b> | Train CNN Model on IBM | Train Image Classification Model       | All Members | IN PROGRESS |