

Project Planning Phase Milestone and Activity List

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| Date | 21 October 2022 |
| Team ID | PNT2022TMID29273 |
| Project Name | Project-Early detection of forest fire using deep learning |

MILESTONE LIST

| Name | Milestone Number | Description | Mandatory | Optional |
|---------------------------|------------------|---|-----------|----------|
| Project Objectives | M-001 | 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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| 2.6 | Technology Training | Attend the technology trainings as per the training Calendar. | All Members | COMPLETED |
| 3.1 | 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 |
| 3.2 | Technology Training | Attend the technology trainings as per the training Calendar. | All Members | COMPLETED |
| 3.3 | Problem - Solution fit & Solution Architecture | Prepare problem - solution fit document& Solution Architecture. | All Members | COMPLETED |
| 3.4 | Technology Training | Attend the technology trainings as per the training Calendar. | All Members | COMPLETED |
| 4.1 | Customer Journey Map | Prepare the customer journey maps to understand the user interactions & experiences with the application (entry to exit). | All Members | COMPLETED |
| 4.2 | Technology Training | Attend the technology trainings as per the training Calendar. | All Members | COMPLETED |
| 4.3 | Functional Requirements & Data Flow Diagrams | Prepare the Functional Requirement Document & Data Flow Diagrams. | All Members | COMPLETED |
| 4.4 | Technology Architecture | Prepare Technology Architecture of the solution. | All Members | COMPLETED |
| 4.5 | Technology Training | Attend the technology trainings as per the training Calendar. | All Members | COMPLETED |
| 5.1 | Milestone& Activity List | Prepare Milestone & Activity List. | All Members | COMPLETED |
| 5.2 | Sprint Delivery Plan | Prepare Sprint Delivery Plan. | All Members | IN PROGRESS |

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

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