**Project Planning Phase**

**Milestone and Activity List**

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| Date | 03-11-2022 |
| Team ID | PNT2022TMID36351 |
| Project Name | Project-Early detection of forest fire using deep learning |

**MILESTONE LIST:**

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| **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:**

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| **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 | |
| **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 |