Milestone

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| **Project Name** | Emerging Methods For Early Detection Of Forest Fires | **Date** | 22/10/2022 |
| **Project Domain** | Artificial Intelligence | **No of Members** | 4 |
| **Project Leader** | Dharshini Priya S | **Project owner/Client** | IBM |

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| Milestone 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 Image Data Generator libraries, Define Parameters/Arguments for Image Data Generator 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 | Opencv for video processing, creating an account in twilio service and sending alert message | 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 DevelopmentPhase | 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** | | | **Assigned To** | **Status / Comments** |
| **1.1** | Access Resources | Access the resources (courses) 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  workspace. | guided | project | 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 GitHubaccount& 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 selectedproject &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 brainstorming session and prioritize the  top 3 ideas based on the feasibility &  importance. | | | 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 | COMPLETED |
| **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 |

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| **8.1** | Model Building | Importing the model building  libraries. | All Members | IN  PROGRESS |
| **8.2** | Model Building | Initializing the model. | All Members | INPROGRE SS |
| **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 | COMPLETED |
| **10.2** | Train CNN Model  on IBM | Train Image Classification  Model | All Members | COMPLETED |