

MILESTONE LIST

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| Project Name | Emerging Methods For Early Detection Of Forest Fires | Date | 21/10/2022 |
| Project Domain | Artificial Intelligence | | 4 |
| Project Leader | Rajapandi M | | IBM |

| 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 ImageDataGenerator libraries,DefineParameters/Arguments for ImageDataGenerator class,Applying Image DataGenerator Functionality to trainset and testset | Yes | |
| Model Building | M-007 | Importing the model building libraries,Initializingthe model,AddingCNN layers,Adding Dense layers,Configuring the learningProcess,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 | M-011 | Prepare Proposed solution , problem-solution fit and Solution Architecture | Yes | |
| Phase-I | M-012 | Prepare Customer journey ,functional requirements,Data flow diagram and Technology Architecture | Yes | |
| Project Design | M-013 | Prepare Milestone list , Activity list and Sprint Delivery Plan | Yes | |
| Phase-II | M-014 | Project Development delivery of Sprint 1, Sprint 2, Sprint 3, Sprint 4 | Yes | |
| Project Planning | M-015 | | | |
| Phase | M-016 | | | |
| Project DevelopmentPhase | M-017 | | | |

ACTIVITY LIST

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|----------------|------------------------------------------------------|----------------------|-----------|
| Project Name | Emerging Methods for Early Detection of Forest Fires | Date | 21/10/202 |
| Project Number | :PNT2022TMID42932 | No of Members | 4 |
| Project Leader | Rajapandi M | Project Owner/Client | IBM |

| Activity Number | Activity Name | Detailed Activity Description | Assigned To | Status / Comments |
|-----------------|-----------------------------|--------------------------------------------------------------------------------------------------|-----------------------|-------------------|
| 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. | rajapandi Amarnath | 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 | sukumar Bharathraj | 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 | All Members | COMPLETED |

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|-----|------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------|--------------------|-------------|
| | | organizingthebrainstormingsession and prioritize the top3ideasbasedonthefeasibility& importance. | | |
| 2.6 | Technology Training | Attendthetechnologytrainingsasper the training Calendar. | All Members | COMPLETED |
| 3.1 | Proposed Solution Document | Preparetheproposedsolution document, which includes thenovelty,feasibilityofidea,business model, social impact, scalability of solution, etc. | Rajapandi Amarnath | COMPLETED |
| 3.2 | Technology Training | Attendthetechnologytrainingsasper the training Calendar. | All Members | COMPLETED |
| 3.3 | Problem - Solution fit & Solution Architecture | Prepareproblem-solutionfitdocument & Solution Architecture. | Sukumar | COMPLETED |
| 3.4 | Technology Training | Attendthetechnologytrainingsasper the training Calendar. | All Members | COMPLETED |
| 4.1 | Customer Journey Map | Preparethecustomerjourneymapsto understand the userinteractions&experienceswiththe application (entry to exit). | All Members | COMPLETED |
| 4.2 | Technology Training | Attendthetechnologytrainingsasper the training Calendar. | All Members | COMPLETED |
| 4. | Functional Requirements & Data Flow Diagrams | PreparetheFunctionalRequirement Document & Data-Flow Diagrams. | Amarnath | IN PROGRESS |
| 3 | Technology Architecture | PrepareTechnologyArchitectureofthe solution. | Sukumar | COMPLETED |
| 4. | Technology Training | Attendthetechnologytrainingsasper the training Calendar. | Bharathraj | COMPLETED |
| 4 | Milestone & Activity List | Prepare Milestone & Activity List. | Rajapandi | COMPLETED |
| 4. | Sprint Delivery Plan | Prepare Sprint Delivery Plan. | Amarnath | COMPLETED |
| 5 | | | sukumar | IN PROGRESS |
| | | | bharathraj | |

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|------|------------------------|-------------------------------------------------------------------------------------------------------------------------------|--------------------|-------------|
| 6 | | Collect datasets from different open Data Collection sources like kaggle.com, data.gov, UCI machine learning repository, etc. | Rajapandi Amarnath | COMPLETED |
| 7.1 | Image Preprocessing | Importing the ImageDataGenerator Library | Amarnath | IN PROGRESS |
| 7.2 | Image Preprocessing | Defining the parameters/arguments for ImageDataGenerator class. | Sukumar | IN PROGRESS |
| 7.3 | Image Preprocessing | Applying ImageDataGenerator functionality to train set and test set. | Bharathraj | IN PROGRESS |
| 8.1 | Model Building | Importing the model building libraries. | Rajapandi | IN PROGRESS |
| 8.2 | Model Building | Initializing the model. | Amarnath | IN PROGRESS |
| 8.3 | Model Building | Adding CNN Layers. | Sukumar | IN PROGRESS |
| 8.4 | Model Building | Adding Dense Layers | Bharathraj | IN PROGRESS |
| 8.5 | Model Building | Configuring the learning process | Rajapandi | IN PROGRESS |
| 8.6 | Model Building | Training the Model | Amarnath | IN PROGRESS |
| 8.7 | Model Building | Save the model | sukumar | IN PROGRESS |
| 8.8 | Model Building | Predictions | Bharathraj | IN PROGRESS |
| 9.1 | Video Analysis | OpenCV for video processing. | Rajapandi | IN PROGRESS |
| 9.2 | Video Analysis | Creating an account in Twilio service. | Rajapandi | IN PROGRESS |
| 9.3 | Video Analysis | Sending alert message. | Amarnath | 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 | Bharathraj | IN PROGRESS |
| | | | Rajapandi | |