

# MILESTONE LIST

|                |                             |                      |            |
|----------------|-----------------------------|----------------------|------------|
| Project Name   | Car Resale Value Prediction | Date                 | 11/10/2022 |
| Project Domain | Applied Data Science        | No of Members        | 5          |
| Project Leader | Charles.M                   | Project Owner/Client | IBM        |

| Milestone Name                     | Milestone Number | Description   | Mandatory | Optional |
|------------------------------------|------------------|---|-----------|----------|
| Pre-Requisites                     | M-001            | We will be downloading the following anaconda software to complete this project and also will be learning some concepts.  | Yes       |          |
| Prior Knowledge                    | M-002            | We will be learning the supervised learning, unsupervised learning, flask, matrices   | Yes       |          |
| Project objectives                 | M-003            | We will get the knowledge about the machine learning algorithms, python with machine learning, clean the data, real time analysis of project, building user interface | Yes       |          |
| Project flow                       | M-004            | In this installing required libraries, data collection, data preprocessing, model building, application building, final UI  | Yes       |          |
| Project structure                  | M-005            | We will be building a flask application that needs HTML pages and this model is built in notebook floods  | Yes       |          |
| Data collection                    | M-006            | Downloading the dataset for the project from the open sources like keggel.com, data.gov   | Yes       |          |
| Visualizing and analyzing the data | M-007            | Importing the important libraries for the project, reading the dataset, univariate, bivariate, multivariate, descriptive analyzing of project done in this phase      | Yes       |          |
| Data preprocessing                 | M-008            | Finding the shape of the dataset and converting the categorical data to integer encoding or binary encoding and balancing dataset, scaling dataset.                   | Yes       |          |
| Model building                     | M-009            | Model building with the use of four algorithms best algorithm used in the future Decision tree, random forest, KNN, xgboost model are used.                           | Yes       |          |
| Application building               | M-010            | Building the html pages, python code with all tests done running the application  | Yes       |          |
| Train the model on IBM             | M-011            | We will learning to built deep learning and deploying it on the cloud   | Yes       |          |
| Ideation phase                     | M-012            | Literature survey on the project and preparing the empathy map  | Yes       |          |
| Project design phase 1             | M-013            | Prepare proposed solution, problem solution fit and solution architecture   | Yes       |          |

|                           |       |   |     |  |
|---------------------------|-------|---|-----|--|
| Project design<br>phase 2 | M-014 | Prepare the customer journey map, functional requirement document, data<br>flow diagrams, technology architecture for the project | Yes |  |
| Project planning          | M-015 | Prepare Milestone, activity list and sprint delivery plan for the project   | Yes |  |

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#### Milestone List

|                              |       |  |     |  |
|------------------------------|-------|--|-----|--|
| phase                        |       |  |     |  |
| Project<br>development phase | M-016 | Project development delivery of sprint 1, sprint 2, sprint 3, sprint 4 | Yes |  |

## Milestone List

## ACTIVITY LIST

|                       |                             |                             |            |
|-----------------------|-----------------------------|-----------------------------|------------|
| <b>Project Name</b>   | Car Resale Value Prediction | <b>Date</b>                 | 01/10/2022 |
| <b>Project Number</b> | 41824-1660645243            | <b>No of Members</b>        | 5          |
| <b>Project Leader</b> | Charles.M                   | <b>Project Owner/Client</b> | 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.   | 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         |
| 2.6             | Technology Training         | Attend the technology trainings as per the training Calendar.  | All Members | IN PROGRESS       |
| 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         |

|            |  |  |             |             |
|------------|--|--|-------------|-------------|
| <b>3.2</b> | Technology Training                            | Attend the technology trainings as per the training Calendar.    | All Members | IN PROGRESS |
| <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              | All Members | IN PROGRESS |

|     |  |   |             |             |
|-----|--|---|-------------|-------------|
|     |  | Calendar.   |             |             |
| 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 | IN PROGRESS |
| 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 | IN PROGRESS |
| 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, etc.  | All Members | COMPLETED   |
| 7.1 | Visualizing and analyzing of data            | Analyzing of data collected and visualzing  | All Members | COMPLETED   |
| 7.2 | Importing libraries                          | Importing of libraries from the downloaded dataset.   | All Members | COMPLETED   |
| 7.3 | Reading the dataset                          | Data are analyzed and reading of data takes place.  | All Members | COMPLETED   |
| 8.1 | Model Building                               | Importing the model building libraries.   | All Members | COMPLETED   |
| 8.2 | Model Building                               | Initializing the model.   | All Members | COMPLETED   |
| 8.3 | Model Building                               | Decision tree model is created and passed as the parameters.  | All Members | COMPLETED   |
| 8.4 | Model Building                               | Random forest model is created and passed as the parameters.  | All Members | COMPLETED   |
| 8.5 | Model Building                               | Xgboost model is created and passed as the parameters.  | All Members | COMPLETED   |
| 8.6 | Model Building                               | Comparing the model.  | All Members | COMPLETED   |

|             |                        |  |             |           |
|-------------|------------------------|--|-------------|-----------|
| <b>8.7</b>  | Model Building         | Save the model                         | All Members | COMPLETED |
| <b>8.8</b>  | Model Building         | Predictions                            | All Members | COMPLETED |
| <b>9.1</b>  | Application building   | Building the HTML pages.               | All Members | COMPLETED |
| <b>9.2</b>  | Application building   | Building the python code.              | All Members | COMPLETED |
| <b>9.3</b>  | Application building   | Running the application.               | All Members | COMPLETED |
| <b>10.1</b> | Train CNN Model on IBM | Register for IBM Cloud                 | All Members | COMPLETED |
| <b>10.2</b> | Train CNN Model on IBM | Train the ML model on IBM.             | All Members | COMPLETED |
| <b>10.3</b> | Train CNN Model on IBM | Integrate flask with scoring end point | All Members | COMPLETED |