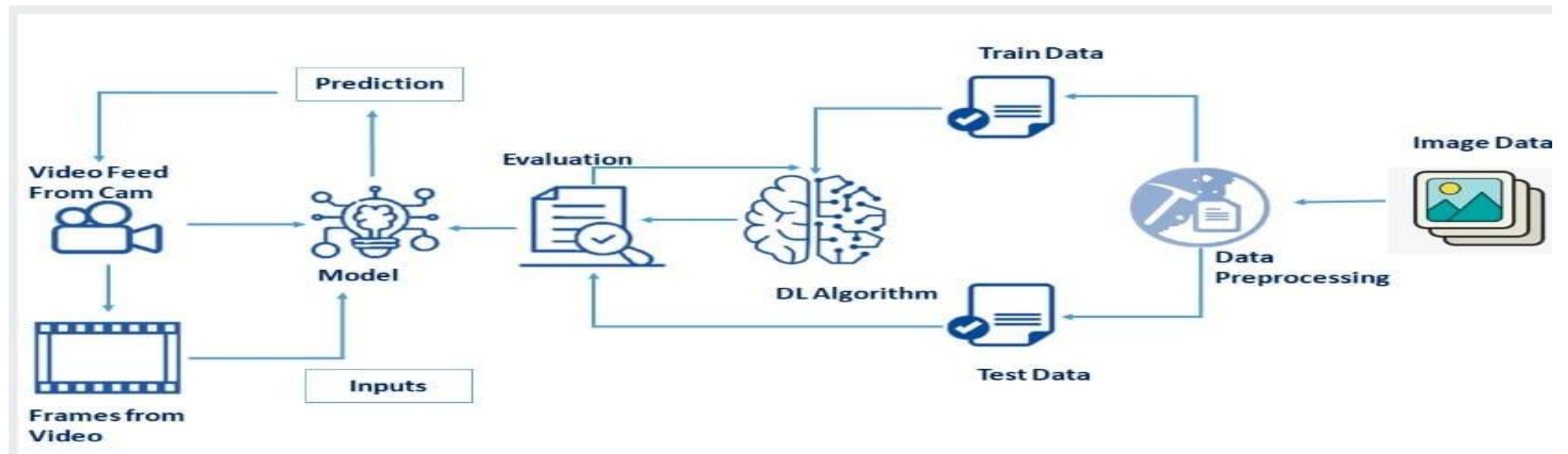


**Project Design Phase-II**  
**Technology Stack (Architecture & Stack)**

|               |  |
|---------------|--|
| Date          | 03October 2022   |
| Team ID       | PNT2022TMID34201   |
| Project Name  | Project – Natural disaster intensity analysis and classification using artificial intelligence |
| Maximum Marks | 4 Marks  |

**Technical Architecture:**



**Table-1 : Components & Technologies:**

| S.No | Component                       | Description   | Technology               |
|------|---------------------------------|---|--------------------------|
| 1.   | User Interface                  | User can analyse the intensity using the website  | HTML, CSS, JavaScript    |
| 2.   | Application Logic-1             | Deployment  | Python                   |
| 3.   | Application Logic-2             | Training and building deep learning model   | IBM Watson Studio        |
| 4.   | Database                        | Data collection of various disaster   | MySQL                    |
| 5.   | Cloud Database                  | Database Service on Cloud   | IBM Cloudant             |
| 6.   | File Storage                    | To store the dataset  | IBM Block Storage        |
| 7.   | Data generation system          | To generate and process the data required for the application   | IBM Weather API          |
| 8.   | Database management system      | An organized collection of data stored in database to access and manage the data easily   | MySQL                    |
| 9.   | Machine Learning Model          | To classify the natural disaster  | Object Recognition Model |
| 10.  | Infrastructure (Server / Cloud) | Application Deployment on Local System / Cloud<br>Local Server Configuration:Python flask<br>Cloud Server Configuration : cloud foundry | Local, Cloud Foundry.    |

**Table-2: Application Characteristics:**

| S.No | Characteristics        | Description                                     | Technology        |
|------|------------------------|---|-------------------|
| 1.   | Open-Source Frameworks | Open source frame works are free for public use | Keras,tensor flow |

| S.No | Characteristics          | Description  | Technology  |
|------|--------------------------|--|---|
|      |                          | and provide the foundation for building a sofware application  |   |
| 2.   | Security Implementations | Keeps the model secure and make sure that only those who have permission can use it  | Encryption and decryption<br>Example:sending an OTP |
| 3.   | Scalable Architecture    | A truely excellent sftware needs a continuous process of improvements and updates.Regularly update the app with new features to enrich it                                  | Waterfall approach<br>Spiral approach               |
| 4.   | Availability             | It includes both online and offline work.Good internet connection is needed for online work to explore the software.Offline works includes the saved data to explore later | Caching ,backend server                             |
| 5.   | Performance              | User can use mobile application and web application to interact with the model   | App development and web development                 |