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

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|---|---|
| Date | 03 October 2022 |
| Team ID | PNT2022TMID04308 |
| Project Name | Project - **Natural Disasters Intensity Analysis And Classification Using Artificial Intelligence** |
| Maximum Marks | 4 Marks |

**Technical Architecture:**

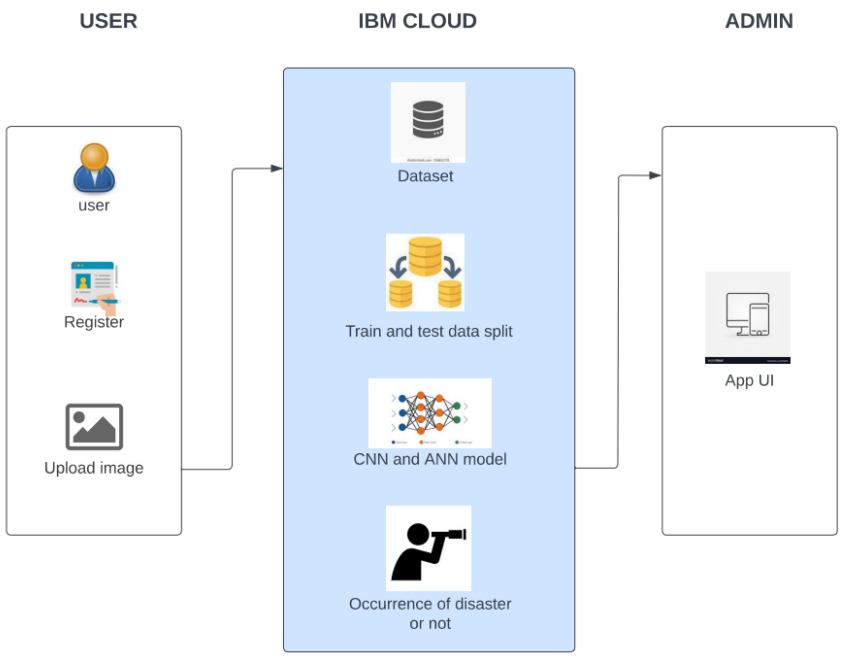


**Table-1 : Components & Technologies:**

| S.No | Component | Description | Technology |
|---|---|---|---|
| 1. | User Interface | A website where the user interacts. | HTML, CSS, Js, Python Flask |
| 2. | Data Preprocess | Preprocessing of the dataset | ImageDataGenerator |
| 3. | Prediction | Occurrence of disaster | Python Models |
| 4. | Cloud Database | Database Service on Cloud | IBM Cloud |
| 5. | Deep Learning Model | Predicting the occurrence of disaster from images and intensity level | CNN+ANN model |

**Table-2: Application Characteristics:**

| S.No | Characteristics | Description | Technology |
|---|---|---|---|
| 1. | Open-Source Frameworks | open-source frameworks used for development | Python, Flask, Python Libraries |
| 2. | Security Implementations | User Authentication | SHA-256 Encryption |
| 3. | Scalable Architecture | The 3-tier architecture (Web, Application, Database) is scalable. | IBM Cloud |
| 4. | Availability | Application made available even under heavy load | IBM Cloud - cloud hosting |
| 5. | Performance | Able to handle multiple requests | IBM Cloud - load balancers |