PROJECT DESIGN PHASE-II

Technology Stack (Architecture & Stack)

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| Date | 14 October 2022 |
| Team ID | PNT2022TMID33575 |
| Project name | Natural disaster intensity  analysis and classification using artificial intelligence |
| Maximum marks | 4 marks |

Technical Architecture:

**Hydrological:** Avalanches, Floods.

**Geophysical:** Earthquakes, Tsunamis,

Land slides.

**Natural Disasters**

**Climatological:** Drought, Wildfires.

**Meteorological:**

Cyclones,

Storms/wave surges.

Table-1: Components and Technologies

|  |  |  |  |
| --- | --- | --- | --- |
| **S.no** | **Component** | **description** | **technology** |
| 1. | Support vector machine | Logic for process in  the application | Python, SQL |
| 2. | Linear | Logic for a process  in the application | AI |
| 3. | Database | Datatype,  configurations, etc. | MySQL,  NoSQL, etc. |
| 4. | Pooling layer | Database service on  cloud | IBM DB2, IBM  Cloudant, etc. |
| 5. | File storage | File storage requirements | IBM block storage or other storage service or local file  system |
| 6. | Decision tree | Purpose of external  API used in the  application | IBM weather API, etc. |
| 7. | External API-2 | Purpose of external  API used in the  application | Aadhar API, etc. |

Table-2: Application Characteristics

|  |  |  |  |
| --- | --- | --- | --- |
| **S.no** | **characteristics** | **description** | **technology** |
| 1. | Open-source frameworks | Functional discriminant  analysis | Source code, design  documents |
| 2. | Security implementations | Geographical information to share problems in  prediction | Seismographs, creepmeters |
| 3. | Scalable architecture | Signal processing, image processing are using scalable  natural disasters | GPS (global positioning system) |
| 4. | Availability | AI system information from seismic imaging earthquake predictors solve  some techniques | NDRF,  seismic intensity meters |
| 5. | Performance | Web-enabled awareness research network can help save lives and limit  the impacts of natural disasters | Land-based sensors, radar sensors. |