

Technology Stack (Architecture and Stack)

Technical architecture

The deliverable includes architecture diagram and information as per table 1 and 2

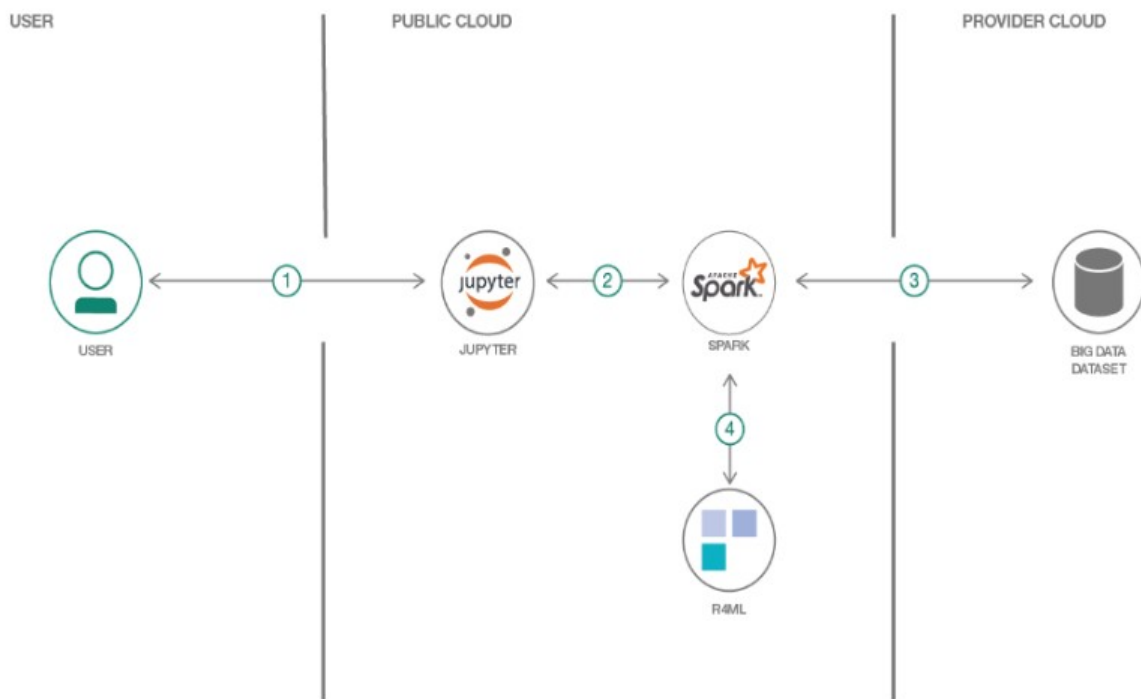


Table 1: Components and Technologies

| SNo | Component | Description | Technology |
|-----|-----------------------|-------------------------------------|----------------------|
| 1 | User interface | How user interacts with application | HTML, CSS, JS, Flask |
| 2 | Application Logic - 1 | Logic for process in | Python |

| | | | |
|----|-------------------------------|----------------------------------|----------------------------------|
| | | application | |
| 3 | Application Logic - 2 | Logic for process in application | IBM Watson STT service |
| 4 | Data processing | To clean data | Pandas, numpy, matplotlib etc |
| 5 | Database | Store data | MySQL |
| 6 | File storage | Storing files | IBM Block storage |
| 7 | External API-1 | External API used in the system | IBM Weather API |
| 8 | External API-2 | External API used in system | Email API |
| 9 | Machine Learning model | Purpose of ML model | Evaluation and prediction models |
| 10 | Infrastructure (Server/Cloud) | Application deployment | IBM Cloud |

Table 2: Application Characteristics

| S No | Characteristics | Description | Technology |
|------|--------------------------|--|-------------------|
| 1 | Open Source Frameworks | Open source frameworks used | Python-Flask |
| 2 | Security Implementations | Security/access controls implemented, firewalls used | Encryptions, SHA2 |
| 3 | Scalable Architecture | Scalability of architecture | Python |
| 4 | Avalability | Availability of the application | IBM Cloud |
| 5 | Performance | Consideration for the performance of the application | Python, Flask |