

Project Design Phase-II
ID: PNT2022TMID04371
Technology Stack (Architecture & Stack)

Technical Architecture:

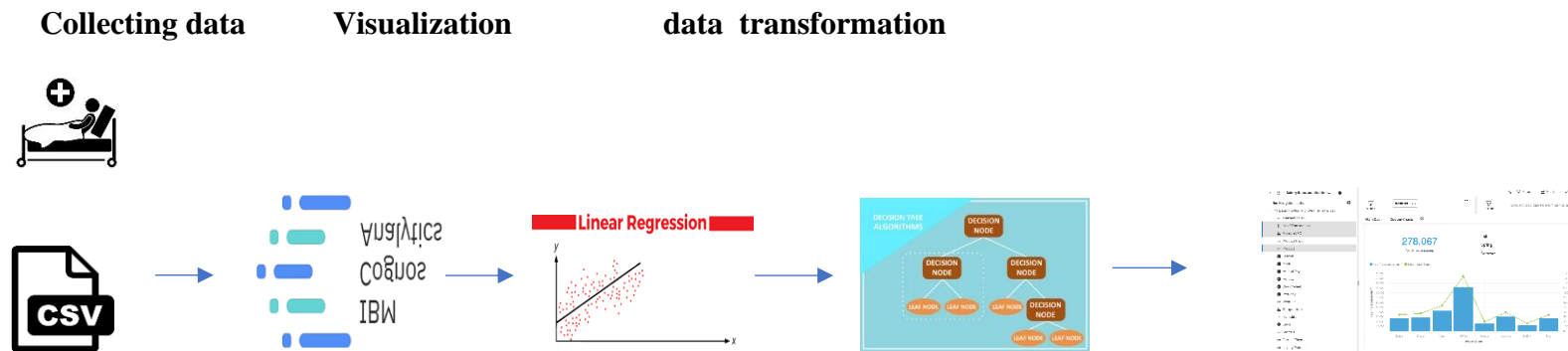


Table-1 : Components & Technologies:

| S.No | Component | Description | Technology |
|------|--------------------|--|--|
| 1. | User Interface | The user interacts with application using dashboard | IBM COGNOS ANALYTICS |
| 2. | Data Processing | The data from the dataset is pre processed | IBM COGNOS ANALYTICS |
| 3. | Cloud Database | The clean dataset is stored on IBM Cloud | IBM Cloud |
| 4. | Data Visualization | The data is visualization into different forms | IBM COGNOS ANALYTICS, python |
| 5. | Prediction | ML algorithm are used for predicting the length stay | ML algorithms-Fuzzy Logic, Tree Bagger ,Random Forest, Decision Tree |

Table-2: Application Characteristics:

| S.No | Characteristics | Description | Technology |
|------|--------------------------|--|--|
| 1. | Open-Source Frameworks | Open-source frameworks used | IBM Cognos analytics,Python |
| 2. | Security Implementations | Request authentications using encryption | Encryption |
| 3. | Scalable Architecture | Scalability consist of 3 – tiers | Dashboard - IBM Cognos analytics Application server – Python Database server – IBM cloud |
| 4. | Availability | The application is available for cloud users | IBM cloud hosting |

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|----|-------------|---|---------------|
| 5. | Performance | The user can know the prolonged period of stay. | ML Algorithms |
|----|-------------|---|---------------|