**TECHNOLOGY STACK**

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| **Date** | November 1st, 2023 |
| **Team ID** | PNT2022TMIDxxxxxx |
| **Project Name** | ASL – Alphabet Recognition |
| **Maximum Marks** | 2 Marks |

**Table-1: Components & Technologies**

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| --- | --- | --- |
| Sr. No. | Component Description | Technology |
| 1. | User Interface | Web UI, Mobile App |
| 2. | Application Logic-1 | Java / Python |
| 3. | Application Logic-2 | IBM Watson Speech to Text (STT) service |
| 4. | Application Logic-3 | IBM Watson Assistant |
| 5. | Database | MySQL, NoSQL |
| 6. | Cloud Database | IBM DB2, IBM Cloudant |
| 7. | File Storage | IBM Block Storage or Other Storage Service or Local Filesystem |
| 8. | External API-1 | IBM Weather API |
| 9. | External API-2 | Aadhar API |
| 10. | Machine Learning Model | Object Recognition Model |
| 11. | Infrastructure (Server / Cloud) | Application Deployment on Cloud |

**Table-2: Application Characteristics**

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| --- | --- | --- |
| Sr. No. | Characteristics Description | Technology |
| 1. | Open-Source Frameworks | HTML, CSS, JavaScript, Angular JS, React JS, Open-source ML frameworks |
| 2. | Security Implementations | Data encryption, Access controls, TLS/SSL, IAM controls, OWASP standards, Firewalls |
| 3. | Scalable Architecture | Scalable microservices architecture, Kubernetes |
| 4. | Availability | Load balancers, Distributed servers, High availability configurations |
| 5. | Performance | Caching mechanisms, Content Delivery Networks (CDNs), Load balancing, Optimization strategies for high request rates |

