**REQUIREMENT ANALYSIS**

**Technology Stack**

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| Date | 28 JUNE 2025 |
| Team ID | LTVIP2025TMID59766 |
| Project Name | **TrafficTelligence: Advanced Traffic Volume Estimation with Machine Learning** |
| Maximum Marks | 4 Marks |

**Technology Stack:**

| **Layer** | **Technology** |
| --- | --- |
| **Frontend (UI)** | React.js / Angular / Vue.js, HTML5, CSS3, JavaScript, Tailwind CSS / Bootstrap |
| **Backend** | Python (Flask/Django/FastAPI), Node.js (optional) |
| **Machine Learning** | TensorFlow, Scikit-Learn, PyTorch, OpenCV (if CV used) |
| **Database** | PostgreSQL, MongoDB, MySQL |
| **Data Storage** | AWS S3, Google Cloud Storage, Azure Blob Storage |
| **Cloud & Deployment** | AWS / GCP / Azure, Docker, Kubernetes, CI/CD pipelines |
| **Data Streaming (Optional)** | Apache Kafka, MQTT (for real-time IoT sensor data) |
| **Visualization** | Plotly, Dash, D3.js, Power BI, Tableau |
| **APIs & Integration** | REST APIs, GraphQL, Google Maps API, Weather APIs, Traffic Sensor APIs |
| **Security** | OAuth 2.0, JWT, HTTPS, Firewall, Data Encryption |

