**Project Design Phase-II**

**Solution Requirements (Functional & Non-functional)**

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| Date | 21 June 2025 |
| Team ID | LTVIP2025TMID41886 |
| Project Name | TrafficTelligence: Advanced Traffic Volume Estimation with Machine Learning |
| Maximum Marks | 4 Marks |

**Functional Requirements:**

Following are the functional requirements of the proposed solution.

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| **FR No.** | **Functional Requirement (Epic)** | **Sub Requirement (Story / Sub-Task)** |
| FR-1 | User Registration | Registration through Form  Registration through Gmail  Registration through LinkedIN |
| FR-2 | User Confirmation | Confirmation via Email  Confirmation via OTP |
| FR-3 | Data upload | User uploads csv file containing traffic data |
| FR-4 | Traffic Volume Estimation | Backend processes data and returns traffic volume estimation |
|  | Graphical Visualization | System displays results as histogram, bar chat, and accuracy metric |

**Non-functional Requirements:**

Following are the non-functional requirements of the proposed solution.

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| **FR No.** | **Non-Functional Requirement** | **Description** |
| NFR-1 | **Usability** | The system will provide a sample, clean, and intuitive UI for all users. |
| NFR-2 | **Security** | Implements input validation; secure data handling; future enhancement with SSL and authentication. |
| NFR-3 | **Reliability** | Ensures consistent and correct predictions from the ML model with tested data. |
| NFR-4 | **Performance** | Delivers traffic volume predictions quality with minimal processing delays. |
| NFR-5 | **Availability** | The application will be hosted with high uptime; future deployment can include cloud hosting. |
| NFR-6 | **Scalability** | System is modular and can scale to handle more data, users, and real-time APIs. |