**Project Design Phase-II**

**Technology Stack (Architecture & Stack)**

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| Date | 16 june 2025 |
| Team ID | LTVIP2025TMID41921 |
| Project Name | Traffic Telligence :Advanced traffic volume estimation with machine learning |
| Maximum Marks | 4 Marks |

**Technical Architecture:**

**A technology stack is the combination of tools, frameworks, libraries, programming languages, and services used to build and run a software application or project. It includes everything from frontend to backend, data storage, and machine learning frameworks (if applicable)**

**Technology Stack Table**

| **Layer** | **Technology** | **Purpose / Function** |
| --- | --- | --- |
| **Frontend** | **HTML, CSS, JavaScript, React (optional)** | **User interface (UI) for interacting with the system** |
| **Backend** | **Python (Flask / Django / FastAPI)** | **API development, server-side logic** |
| **Machine Learning** | **Python, TensorFlow / PyTorch / Scikit-learn, OpenCV** | **Model training, predictions (Anime GAN or Traffic ML)** |
| **Data Storage** | **SQLite / PostgreSQL / MySQL / MongoDB** | **Store user data, results, or logs** |
| **Cloud / Hosting** | **AWS / Heroku / Google Cloud / Render** | **Hosting the application or model** |
| **Version Control** | **Git + GitHub** | **Code collaboration and backup** |
| **Jupyter Notebook** | **Jupyter Lab / Google Colab** | **Model development and experimentation** |
| **Other Tools** | **Pandas, NumPy, Matplotlib / Seaborn** | **Data preprocessing, analysis, and visualization** |