PROJECT DESIGN PHASE

Solution Architecture

Date	28-06-2025
Team ID	LTVIP2025TMID45015
Project Name	TrafficTelligence: Advanced Traffic Volume Estimation with Machine Learning
Maximum Marks	4 marks

Languages:

- Python

Frameworks:

- Flask (API/backend)
- Scikit-learn (ML model training and evaluation)

Tools:

- Jupyter Notebook (experimentation)
- Google Colab (model development)
- Visual Studio Code (web app)

Deployment:

- Flask local server (can be upgraded to Render, Heroku, or Replit)

System Architecture Flow:

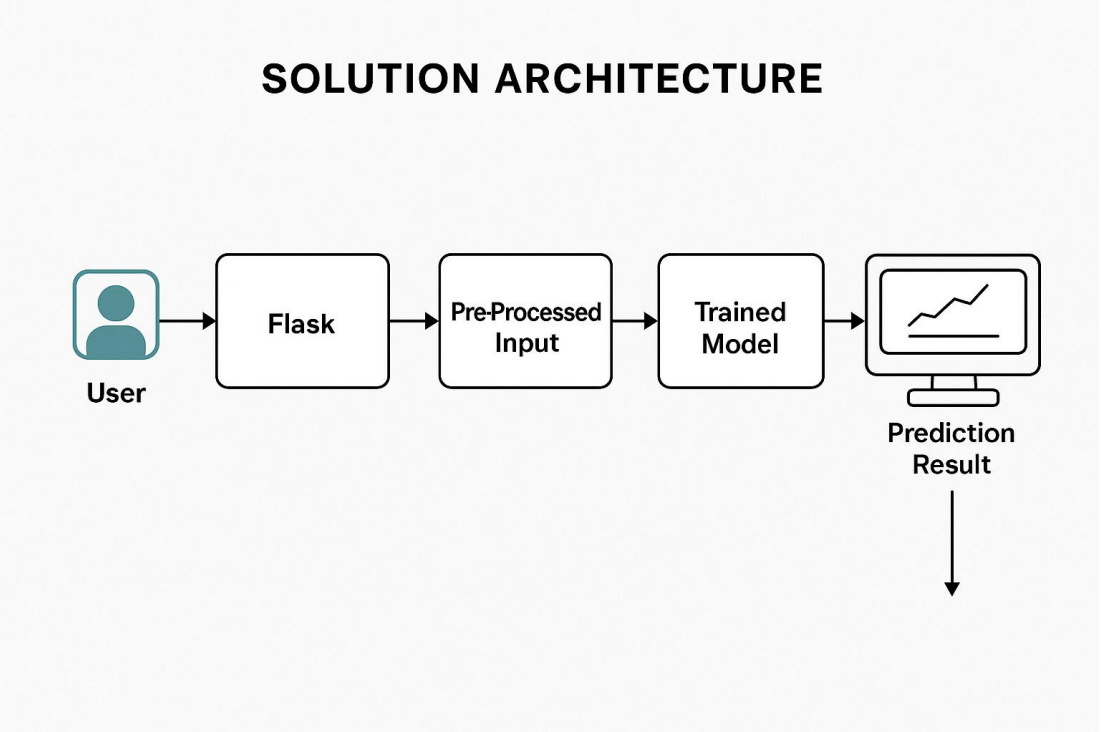
User Input (via HTML form) → Flask Backend → Preprocessed Data → Trained Model → Traffic Prediction → Displayed on Result Page

User Flow:

Home → Input Page (index.html) → Prediction Page (final.html) →

UI/UX Features:

- Clean and minimal form design
- Responsive layout for all devices
- Navigation bar with links to essential sections



The above is the Solution architecture of **TrafficTelligence** showing the flow from user input through Flask backend, preprocessing, model prediction, and result rendering.