**Initial Project Planning Template**

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| Date | 15 August 2024 |
| Team ID | LTVIP2024TMID24789 |
| Project Name | TrafficTelligence: Advanced Traffic Volume Estimation with Machine Learning |
| Maximum Marks | 4 Marks |

**Product Backlog, Sprint Schedule, and Estimation (4 Marks)**

| **Sprint** | **Functional Requirement (Epic)** | **User Story Number** | **User Story / Task** | **Key Function** | **Story Points** | **Priority** | **Team Members** | **Sprint Start Date** | **Sprint End Date (Planned)** |
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| Sprint-1 | User Registration and Login | USN-1 | As a user, I can register using email and password. | Authentication & Account Setup | 2 | High | Jhansi,  Nandini,  Durga,  Bharath | 16 Aug 2024 | 18 aug 2024 |
| Sprint-1 |  | USN-2 | As a user, I receive a confirmation email upon registration. | Email Verification | 1 | High | Jhansi,  Nandini,  Durga,  Bharath | 16 Aug 2024 | 18 aug 2024 |
|  |  | USN-3 | As a user, I can log in using email and password credentials. | User Authentication & Login | 1 | High | Jhansi,  Nandini,  Durga,  Bharath | 16 Aug 2024 | 18 aug 2024 |
| Sprint-2 | Data Preprocessing and Model Selection | USN-4 | Preprocess traffic data (handle missing values, encode categories, split date/time). | Data Cleaning, Encoding | 3 | High | Jhansi,  Nandini,  Durga,  Bharath | 20 Aug 2024 | 25 Aug 2024 |
|  |  | USN-5 | Train models: Linear Regression, Random Forest, Decision Tree, XGBoost, SVM. | Model Training & Tuning | 5 | High | Jhansi,  Nandini,  Durga,  Bharath | 20 Aug 2024 | 25 Aug 2024 |
| Sprint-3 | Model Evaluation and Web Deployment | USN-6 | Evaluate models using metrics (MSE, MAE, R²). | Performance Evaluation | 3 | Medium | Jhansi,  Nandini,  Durga,  Bharath | 01 Sep 2024 | 5 Sep 2024 |
|  |  | USN-7 | Integrate models into Flask web application for predictions. | Backend Development | 4 | High | Jhansi,  Nandini,  Durga,  Bharath | 01 Sep 2024 | 5 Sep 2024 |
| Sprint-4 | Web Application Testing & Deployment | USN-8 | Conduct unit, integration, and system testing, and deploy the web app. | Testing & Deployment | 5 | High | Jhansi,  Nandini,  Durga,  Bharath | 6 Sep 2024 | 10 Sep 2024 |