

I, **Soumesh Padhi**, played a pivotal role in the *Metro Line Prediction using Machine Learning* project by leading the **front-end development**, **API integration**, and **deployment process**.

My core contributions included:

- **User Interface Development:** I designed and implemented a **responsive and intuitive front-end** using **HTML, CSS, and JavaScript**. The interface was crafted to be clean, visually appealing, and user-friendly, allowing individuals of varying technical backgrounds to easily interact with the system and input relevant data.
- **Flask API Integration:** I developed a **robust Flask-based API** that served as a communication bridge between the front-end and the machine learning models. The API was structured to efficiently handle incoming requests and deliver prediction results with minimal latency and maximum reliability.
- **Remote Deployment Using NGROK:** To ensure seamless remote access and testing, I integrated **NGROK** to expose the local Flask server to the internet. This approach allowed the system to be accessed externally without the need for complex server setups, enabling easy testing and demonstration.
- **Dataset Preparation:** I worked collaboratively with **Jaivardhan** on collecting, cleaning, and organizing the dataset. Our joint effort ensured that the data was accurate, consistent, and ready for model training and evaluation.

Through my work on the **front-end interface**, **backend API**, and **deployment setup**, I helped transform the system into a complete and accessible solution — one that was technically robust, visually engaging, and easy to use in real-world scenarios.