

Data + Analytics, Engineering Services

DATA DASHBOARD & IOT INTEGRATION

Aditi partnered with a major rail transport company to help optimize the speed of locomotives in urban areas. The successful completion of this project provided the company with a dashboard to capture, store, and analyze data from IoT sensors on their locomotives and provide acceleration guidance to train engineers.

THE CHALLENGE

A major logistical company specializing in rail transport wanted to enhance efficiency and reduce costs by optimizing the speed of locomotives, especially when transitioning in and out of urban areas.

THE ADITI TEAM

This company partnered with Aditi to capture, store, and analyze data from IoT sensors on their locomotives and provide acceleration guidance to train engineers.

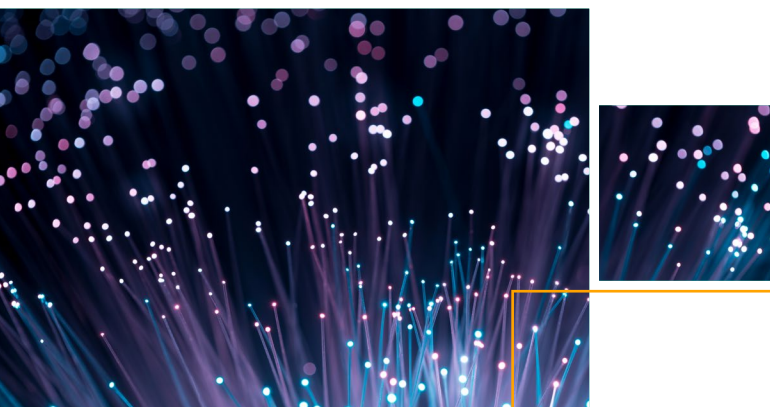
Aditi provided the following team to create a software solution for this company:

- Database administrators (DBAs)
- Front-end developers
- Back-end developers
- Data scientists
- IoT experts
- A project manager
- A system architect

OUR SOLUTION

To create this software system, the team created a proof-of-concept dashboard to visualize and interpret data from locomotive IoT devices. The core objectives were locomotive speed analysis, especially in transitions in and out of urban zones, determining the ideal throttle adjustments to minimize sudden speed changes, and designing an application to offer real-time suggestions to conductors.

After all necessary data and parameters were captured and analyzed, the team crafted a user-friendly dashboard for real-time visualization and decision-making. They also created an application to advise conductors on throttle adjustments to ensure seamless transitions and optimized fuel consumption.



TECHNOLOGY & METHODOLOGIES

The technology used for this solution includes Postgres for database management and Python for backend development and data processing. JavaScript was employed for frontend development and interactive visualizations.

OUTCOME

Aditi's software development team successfully created a system that gives conductors real-time, data-driven throttle advice. This solution minimized unnecessary speed changes and thus enhanced fuel efficiency, which saved the company millions of dollars in its inaugural year.

Through the synergistic blend of diverse technologies, ranging from Postgres to Python, coupled with a robust team structure, Aditi was able to craft an efficient solution for this company, which underscores our prowess at using technology to deliver measurable business results.



ADITI EMPOWERS DATA AND ANALYTICS

Aditi partners with you through the entire life cycle of application development and modernization so that you can expedite time-to-deployment. Aditi builds teams quickly to perform business analysis, project management, UI/UX design, software development, QA/testing, and ongoing support.

Contact us today to discover how we can help you leverage the power of application development.

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