

Machine Learning Service Times 2.0



Machine Learning and Service Times

What do machine learning and service times have to do with each other? For fleets that want to improve utilization, machine-learned service times are the proverbial golden ticket. Here's why. 'Service time' is the label given to the full duration of a driver or technician's visit to a customer — start to finish. Service time includes the amount of time a driver spends parking, unloading, merchandising, transporting goods, performing a service, completing the transaction, and returning to the vehicle.

Typically, an average service time is estimated and built into every stop on a route (e.g., 25 minutes per stop). While a logical approach, it ignores the variability among actual service times. Some stops may take less time than the estimate, and others may take substantially longer. These variations create inefficiencies, particularly with fleet utilization; they also impact on-time arrivals. This is where machine-learned service times come into play. With machine learning, more accurate service time predictions are built into future route plans to improve fleet utilization. Here's how.

Machine-learned Service Times and Fleet Utilization

Working in the background of the platform, Wise Systems' proprietary machine learning models are constantly ingesting fleet data to improve service time accuracy. The machine-learned service time model analyzes data of drivers' previous customer visits to project future service times.

For example, by understanding that the service time for Stop A, a big-box retailer, is typically 42 minutes and that the service time for Stop B, a convenience store, is typically 12 minutes, the Wise Systems platform is able to build much tighter and more accurate routes for fleets. Further, because your fleet's data is continuously added to the model, Wise Systems is able to continuously improve your operation's performance.



Machine Learning in Practice

For the past few years, Wise Systems' machine-learned service times model has been helping fleets improve their routing efficiency. For instance, machine-learned service times played an instrumental role in improving one beverage distributor's fleet utilization from 70% to more than 90%.

The Machine-learned Service Times Pioneer

Wise Systems has pioneered the use of machine learning for service times and with this release is continuing to enhance the model and strengthen the impact on fleet performance. The latest edition of the AI model is now available: Machine Learning Service Times 2.0.

The latest version of Wise Systems' proprietary machine-learned service times model enhances the original:

More Variables Analyzed - The model considers new, relevant variables — improving the accuracy of the service time predictions. After rigorous analysis, Wise Systems selected a new set of variables to predict service times: size of delivery, weight of delivery inventory, priority of stop, delivery type (pickup or delivery), driver, day of week, month, and historical service times. Using these data sets drives improvement in future route performance, helping the system project how long it will take to service a stop and reducing the total time drivers spend completing routes.

Understanding Machine Learning's Impact - Machine learning can be a 'black box' — data goes in, results pop out — but what are the algorithms really doing? Now, managers can get a better idea of how machine learning improves fleet performance through the machine-learned service times report. The report provides information that compares predictions to actual performance. Managers will have access to details about the uploaded service time, machine-learned service time, and actual service time to know how well the model is performing.

Always Improving

For fleets that want to leverage AI to drive performance and customer service, there's no better time to bring the power of machine learning to your operations. If you have any questions about how your fleet can start using machine learning, talk to your Wise Systems representative.

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ABOUT WISE SYSTEMS

Wise Systems provides AI-driven dispatch and routing software that enables the perfect delivery experience. For last-mile operations that want to compete successfully in a dynamic world, the Wise Systems platform continuously improves fleet efficiency, performance, and customer service.