Using machine learning to improve the customers Jyrney

The Brief

Jyrney is a ground transport booking and management company looking to transform the private hire industry by providing a comprehensive mobility platform bringing together ride-hail, taxi, private hire, and chauffeur for any travel booking tool.

Currently, the taxi and private car hire industry suffers from inaccurate travel time and route descriptions which leaves vehicles idling or running late and can damage the customer experience through inefficiencies.

Jyrney is looking to create a service that optimises the allocation of available taxi fleets, providing accurate pick-up time estimates while simultaneously connecting various ground transport operators and selecting the best options for the customer. This enables Jyrney to offer a solution to the traveller that removes taxi pick-up anxiety by automatically reallocating late running vehicles to alternative operators, helping to reduce pollution and deliver better service for customers.

The Approach

Data scientists at the STFC Hartree Centre developed a machine learning algorithm and an application programming interface (API) to map and process taxi journeys. The API was designed to help Jyrney predict when a taxi would not be dispatched on time and connects with an integrated warning system to ensure vehicles are reallocated to another company who have an improved chance of picking up on time.

The team investigated different ways of mapping routes which led them to implement a free open-source solution for Jyrney. This solution provides optimal time management for car hire companies and delivers better service to customers.

The Benefits

The power of fast, high-quality machine learning mapping created a more accurate view of travel times and route descriptions, improving car management and customer service. The data science team developed multiple solutions for Jyrney to be able to map vehicle travel so they can integrate the option most effective for them and their customers. This data collection also gave Jyrney a unique view of how vehicles move across the country, improving the company's service. The Hartree Centre also worked with Jyrney to create a database of vehicle emissions to help provide options for greener travel routes.

"Our collaboration with the Hartree Centre proved instrumental in understanding the challenge at hand and developing an innovative solution using data driven insights. By harnessing the potential of machine learning, we have successfully identified key improvements that significantly enhance the traveller's experience, ensuring their journeys are seamless and punctual."

– Daniel Price, Jyrney