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Hyper-heuristics for Routing

Optrak provides end-to-end vehicle routing and route optimisation software for transport managers and operational teams.The software saves Optrak's customers money, reduces their planning times and improves their customer service. Optimised routing allows operators to decrease fuel usage and number of vehicles with typical savings of 10% - 15% over manual planned methods.

Our multidisciplinary Knowledge Transfer Partnership project with Optrak is structured to develop and implement novel and advanced AI technologies for routing, based on hyper-heuristics (high level adaptive search algorithms) - capable of creating self-tuning optimisers for standard and non-standard road freight markets to improve the quality of solution deployment. The hyper-heuristic framework will also reduce the time-to-market for optimisers that address either new markets or unsolved complexities in the existing ones; potentially bringing route optimisation to transport areas that require substantial decarbonisation, such as shipping and aviation. Additionally, optimisers created to solve specific new challenges are subsequently incorporated into the wider selection pool for solving current solutions, meaning existing customers can continuously benefit from new research.

Investigators

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OPTRAK
VEHICLE ROUTING SOFTWARE

Funding Source

Innovate UK

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