

# Tom Murarik

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At Ocado Logistics, I have ownership of key projects under the direct oversight of senior leadership, driving millions of pounds of savings in logistics costs. Leveraging mathematical skills, best practices in software development as well as business acumen, I devise and deliver high-impact end-to-end solutions for the Ocado Group's many retail partners.

I have extensive experience in solving Combinatorial Optimisation Problems in industry, in particular Vehicle Routing Problems (VRPs). I bring a pragmatic, engineering-centric approach: the deployment, maintainability and stakeholder interpretability of solutions takes precedence over academic rigor.

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## Experience

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**Senior Data Scientist**, Ocado Logistics, Hertfordshire Jul 2025–Present

- **Network optimisation:** solving highly constrained **facility location problems** using **metaheuristic** frameworks.
- **Multi-objective optimisation:** finding optimal driver shifts by pairing MOO with **Monte Carlo simulations**.
- **VRPs:** improving routing efficiency by enabling parallelisation and new algorithms such as Hybrid Genetic Search.
- **ML models:** deployed **tree-based** forecasting models, drastically increasing accuracy of network-wide sales forecasts.
- **MLOps:** creating centralised ML forecasting template pipeline, enabling easy repeated use across multiple teams.
- **Cloud:** ownership of business-critical pipelines, extensively involved in enabling **GCP** usage for Ocado Logistics.
- Leading **workshops** for Ocado's analysts, incl. sessions on Agentic AI, practical ML and advanced analytics concepts.
- Business impact: routing efficiency KPI increases, improved resource planning via forecasting, driving decisions of locating new customer fulfilment facilities via simulation, upskilling of colleagues.

**Operational Research Software Developer**, Optrak Vehicle Routing Software, Hertfordshire Sep 2023–Jul 2025

- **Agile** work in interdisciplinary teams; taking mathematical concepts from client spec to development to deployment.
- Development of heuristic architectures in **Scala** for a SoTA VRP solver trusted by multiple large haulage companies.
- Improved optimiser performance while decreasing run-time, presented at the [VeRoLog](#) conference 2025.
- Stakeholder engagement: secured **new business** from cash-and-carry providers at industry conferences.

**Software Engineer**, WeBuyAnyCard, Surrey Oct 2020–Sep 2022

- Full time role for an e-commerce company: API development, databases and card-sorting robot arm prototyping.

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## Education

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University of Edinburgh **MSc Operational Research with Data Science:** Distinction Graduated Sep 2023

University College London **BSc Chemistry:** First-Class Honours

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## Skills

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Mathematical Optimisation	Heuristics & Metaheuristics	Simulation
Python & Scala	DevOps, CI/CD, Cloud	Timeseries Forecasting

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## Achievements and Interests

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- Runner-Up in the Operational Research Society's [May Hicks Award](#) for my MSc Dissertation. Please see the [pre-print](#).
- For my MSc, I finished in the 98<sup>th</sup> percentile of the cohort and came top in several classes.
- Article contributor to the Operational Research Society's semi-annual publication, [Impact Magazine](#).
- Guest lectures at several universities and colleges, promoting Operational Research as a discipline.
- Awarded stipend by the Provost of UCL for services to the Department of Chemistry.
- Competitive rower at UCL for three years; UCL first boat stroke at BUCS competition 2017.

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## References upon Request

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Dr Julian Hall – Lead Developer of [HiGHS](#) Solver, University of Edinburgh

Mr Martin Newman – Head of Product Engineering, Vodafone UK

Mr Timothy Pigden – Managing Director, Optrak Vehicle Routing Software