AI-Driven Analytics

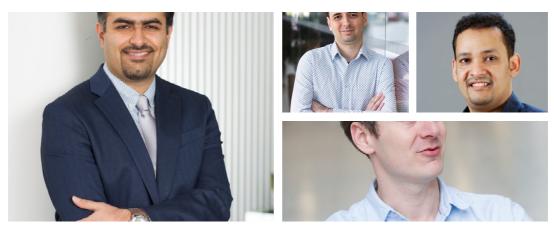A METHODS@MANCHESTER SUMMER SCHOOL 2025

Course Overview

AI-Driven Analytics is brought to you in collaboration with the University of Manchester's [Decision and Cognitive Science Research Centre](). The Centre is based within Alliance Manchester Business School and promotes cross-disciplinary research within decision sciences and cognitive sciences; and applies and evaluates its research findings on real-world decision problems in all sectors.

The course will provide you with a thorough exploration of the latest analytics methodologies, progressing from foundational data handling to cutting-edge predictive and prescriptive techniques. It combines theoretical understandings with practical exercises, encouraging attendees to apply concepts in real-time scenarios.

Meet your course leads

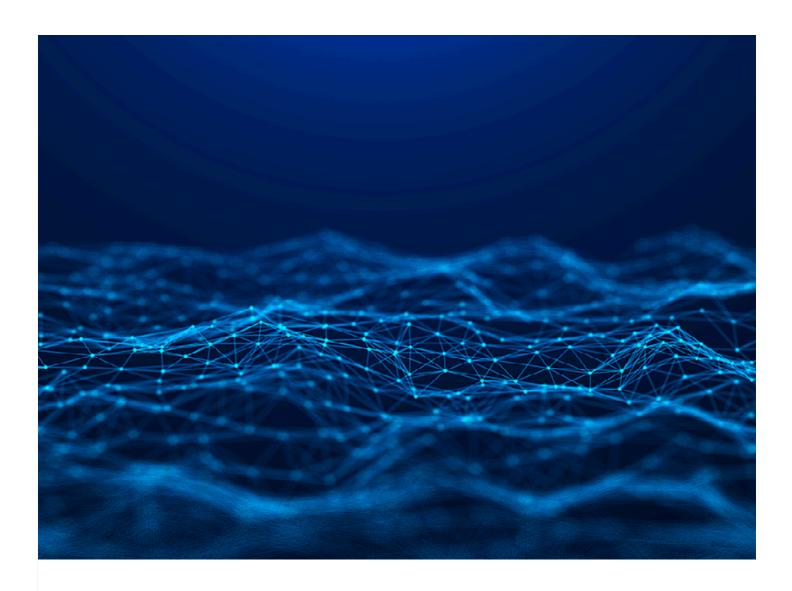Ali Hassanzadeh, Eghbal Rahimikia, Ahmed Kheiri, & Richard Allmendinger

Ali Hassanzadeh is a Lecturer (Assistant Professor) in management science at Alliance Manchester Business School, University of Manchester. Ali's research has mostly centered around developing mathematical models to help high-level decision makers to improve operations in their organizations. Theory-wise, he primarily works with combinatorial optimization models, distributed optimization, algorithm design, and machine learning techniques.

Eghbal Rahimikia is a Lecturer (Assistant Professor) in Financial Technology (FinTech) at Alliance Manchester Business School, University of Manchester. His research focuses on the theory and application of machine learning (ML) and natural language processing (NLP) in finance. Currently, he is dedicated to developing a repository for Large Language Models (LLMs) in business, with a particular emphasis on accounting and finance (FinText.ai).

Dr Ahmed Kheiri is a Senior Lecturer (Associate Professor) in Management Science at Alliance Manchester Business School, University of Manchester. His research interests lie at the intersection of operational research and computer science, investigating flexible and general cross domain optimisation methods to solve NP-hard optimisation problems. His research has made important contributions to the field of hyper-heuristics and their applications in Transportation and Healthcare.

Richard Allmendinger is Professor of Applied Artificial Intelligence, and Associate Dean for Business Engagement, Civic & Cultural Partnerships in the Faculty of Humanities, The University of Manchester, UK. He is also a Co-founder, COO and Head of AI at VeriBee (a UoM spinout focussing on automated software testing); Independent Scientific Advisor at the Alan Turing Institute (UK's national centre for AI and Data Science); AI Advisor for several organisations including River Capital (private equity), Ark Biotech (bioprocessing), Multus (cultivated meat), GuruAI (music education),

and Dals (translation and localization); co-Lead of the North West Productivity Forum; External Examiner for Warwick Business School; Senior Member of the IEEE; Editorial Board Member of several international AI journals.

Course Aims

This course aims to support participants with:

- Developing technical skills in the are of AI-driven analytics;
- Improving awareness of prescriptive analytics methods;
- Exploring real world examples of where prescriptive analytics has significantly influenced outcomes in business, healthcare, and other sectors;
- Understandings of basic machine learning tools;
- Inspiring innovative thinking about how data can drive decision-making in various fields.

Who should attend?

This course is intended for PhD students, Early Career Researchers (ECR), research associates, junior lecturers, and other researchers interested in exploring various analytics methods ranging from descriptive and predictive to prescriptive analytics.

Course Resources

Online resources and documentation will be provided upon registration.

Course Timetable

This course will run 30 June to 4 July 2025.

Day	Morning	Afternoon
Monday		**Introduction to Data Analytics**
Tuesday	**Machine Learning Essentials – Part I**	**Machine Learning Essentials – Part II**
Wednesday	**Introduction to Natural Language Processing (NLP)**	**Harnessing Large Language Models (LLMs)**
Thursday	**Foundations of Prescriptive Analytics**	**Applications of Prescriptive Analytics**
Friday	**Integrating Analytics with Business Strategy**	

Costs

- Full price: £900
- PGR/reduced rate: £600

We will have two bursary options available. You can view more information on our page [here](#) to find out your eligibility and how to apply.

Book Your Place

Please purchase via our online store below before 15 June (payment by card only). If you any issues while purchasing, please get in touch with methods@manchester.ac.uk.

Purchase Place

Any questions, please do not hesitate to contact us on methods@manchester.ac.uk

Main Summer School Page