INDIAN INSTITUTE OF MANAGEMENT AHMEDABAD

Invites applications for the post of

RESEARCH ASSOCIATE
in Data-driven E-Commerce Order Fulfilment

As e-commerce continues to grow, the logistics of moving products along the last leg from warehouses to end-customers has become more important and more complex. The market is highly competitive, volumes increase and customers expect faster, on-demand deliveries, 7 days a week. As of 2022, the USA e-commerce retail market is expected to grow to a staggering US\$ 638 billion, from US\$ 409 billion in 2017. Similar growth rates are reported for Europe and several Asian countries. To cope with this growth in expected volume, the capacity of last-mile delivery systems will have to expand significantly.

The focus of this particular project is on e-fulfilment: a term which collectively denotes warehousing operations, last-mile delivery, and their interdependence. Within the context of e-fulfilment, we study data-driven optimization. Key to this research is the question of how data can be used to make better decisions. Data from various sources are available in abundance: sensor and tracking data (IoT), demand, traffic and weather forecasts, etc. It, however, remains largely unclear how this data can be used effectively to improve e-fulfilment. Consequently, the main goal of this project is to develop data-driven optimization techniques to improve efficiency in e-fulfilment, while reducing costs, increasing customer satisfaction, and lowering the ecological impact.

Within the context of the project, the candidate will be developing a new methodology, which typically involves Mathematical programming (Integer and Constraint Programming), Stochastic optimization, as well as Machine learning. This project is funded by the Netherlands Organisation for Scientific Research (NWO) and the Indian Ministry of Electronics and Information Technology (MeitY).

The Post-doctoral candidate is expected to pursue scientific research in cooperation with eCommerce companies, and publish research results in scientific journals. This position is based out of Ahmedabad, India. The candidate also participates in the education program and   workshops.

Applicants for the project should have completed (or be close to completion of) a Ph.D. degree in Operations Research, Computer Science, Econometrics, Mathematics or a comparable domain. Fluency in English is required. Moreover, the candidate must be comfortable in programming in languages such as Java/C++ and R/Python. Affinity with Big Data Science, Operations Management or Econometrics is a plus.

The contract is initially for one year with a potential for extending to another year. Interested candidates can apply along with their research profile to latha@iima.ac.in