

The Role of Optimization and Machine Learning in e-Commerce Logistics in 2030

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Abstract : Global e-commerce sales have reached unprecedented levels in the past few years. As this trend is only predicted to go up as we continue into the '20s, new challenges will be faced by companies when planning and controlling e-commerce logistics. In this paper, we survey the related literature on Optimization and Machine Learning as well as on combined methodologies. We also identify the distinctive features of next-generation planning algorithms - namely scalability, model-and-run features and learning capabilities - that will be fundamental to cope with the scale and complexity of logistics in the next decade.

Keywords : e-commerce, hardware acceleration, logistics, machine learning, mixed integer programming, optimization

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