Its all fuzzy models and machine learning

Ian Yeoman¹

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Predicting the behavior of customers plays a crucial role in the quality of resource management and customer services. Rabieyan and Pohl's paper using fuzzy neural networks makes explicit how customer value can be determined and how the customer portfolio will be optimized. Rusdiansyah and Putri consider a stochastic demand problem under a fixed-price newsvendor setting finding that as a result of the numerical experiments, it is found that in the decentralized condition, the most upstream entity gets the biggest percentage of the total supply chain revenue and the most downstream one gets the smallest percentage of the total supply chain revenue.

Information is the fundamental driver of assets pricing volatility in the financial market. Othman's and colleagues study applied the symmetric volatility structure of Bitcoin currency which can be measured through four input attributes such as open price (OP), high price (HP), low price (LP), and close price (CP) for predicting its price future trend. The authors find that Bitcoin price trend is based on its symmetric volatility structure. Reinforcement learning (RL) is an area of machine learning concerned with how

agents take actions to optimize a given long-term reward by interacting with the environment they are placed in. Bondoux and colleagues is new airline Revenue Management System (RMS) based on RL, which does not require a demand forecaster.

Could we apply Revenue Management (RM) in the food industry? Gupta and Sharma applied the principles of RM using a fuzzy multi-objective problem formulated to maximize the revenue and minimize the cost simultaneously. Forecasting demand and understanding sales drivers are one of the most important tasks in retail analytics. Antipov and Pokryshevskaya propose a conceptual model for sales modeling based on standard POS data available to any retailer and generate almost 500 potentially useful predictors of a focal SKU's sales accordingly.

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✉ Ian Yeoman
ian.yeoman@vuw.ac.nz

¹ Victoria University of Wellington, Wellington, New Zealand