FRAMEWORK FOR MULTI-AGENT SIMULATION OF USER BEHAVIOUR IN E-COMMERCE SITES

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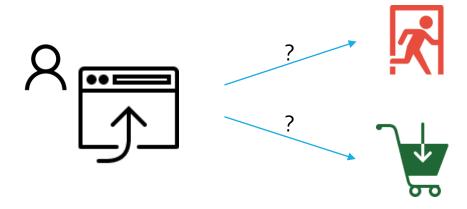
Duarte Duarte





Context

- Customers interact with e-commerce websites in different ways
- Companies want to optimize success metrics (CTR, CPC, ...) for profit
- Changing what, how and when content (ads, recommendations, ...) is displayed influences customers' interactions









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Context

- Summarizing and analysing this behaviour is expensive, hard, tricky, ...
- Data scientists need to resort to classic techniques with a high operational cost.



multi-armed bandit optimization



A/B testing

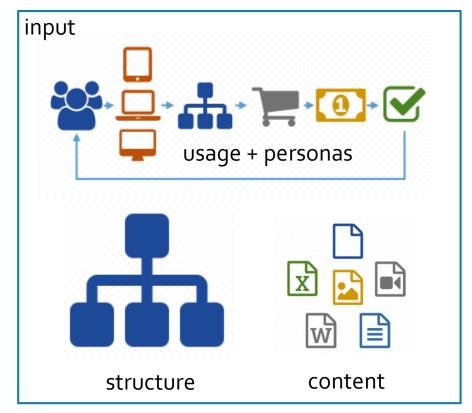








Towards a solution





multi-agent simulation (Bayesian networks, Markov chains, ...)



evaluation of e-commerce success metrics





Why?

- Evaluation of "what-if" scenarios by data scientists
 - Recommendation engines
 - Ad placement/relevance
 - Segmentation and targeting
- Novelty



Q&A

Thank you!



