

# "OPTIMAL SEARCH IN DECISION TREES"



**IISERB**

We model a search problem in the general setting of a decision tree: a reward maximizing consumer encounters a tree where each non-terminal node requires her to decide which subsequent path to choose. Each terminal node is a unique alternative that generates an ex-ante unknown reward and entails a cost. We allow the nodes to be ordered sets (lists). We find the optimal search policy for the decision maker in the above setting. Our model is applicable to consumer choice in shopping malls, retail stores and e-retail websites.



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Dr. Ruhi Sonal is an economic theorist who works primarily in the areas of decision theory and game theory. She completed her PhD from IIT Delhi in 2020 and her work has been published in leading journals in economics. While her research interests are varied, she specializes in modeling boundedly rational agents in different economic settings. Prior to joining IIIT Delhi, she worked as an Assistant Professor at IIT Jodhpur.

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