

Contextual Multi-Armed Bandits, with Applications to Precision Medicine and Health, Dynamic Treatment Strategies, and Reinforcement Learning Healthcare Systems

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Abstract

This talk begins with an overview of recent developments in contextual multi-armed bandits in personalized medicine/marketing and recommender systems. It then follows up with their applications to related projects at the Center for Innovative Study Design at Stanford, including precision health and medicine, sequential multiple assignment randomization trials, adaptive dynamic treatment strategies, and learning healthcare systems.