

EXPERT ADVICE AND REGRET FOR SERIAL RECOMMENDERS

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ABSTRACT

In this paper we propose a tentative framework (R3) for adapting a sequence of predictions (guided tour) generated by what we call a *serial recommender*. The R3 framework (*rate, recommend, regret*) is applied to the construction of personalized guided tours, based on expert advice, in the domain of cultural heritage, in particular *digital dossiers* about contemporary art. Guided tours are in first instance obtained by tracking expert users. Our proposal is based on a variant of decision theory, that uses a regret function to measure the difference between a proposed decision and a finite collection of expert decisions. In our framework, personalization may then be seen as a minimization problem over a weighting scheme, expressing the relative importance of experts of which tours are available. Our aim in this paper is to arrive at a formalization of the recommendation of sequences (guided tours) that allows for adaptation to individual user preferences by a revision of the weight attached to a particular advice based on user feedback.