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Diversification of Youtube's Recommendation system

Teenagers are heavily influenced by youtube videos, a study suggests 60% of influencers for teenagers are Youtube artists. Over the past year, Youtube has been castigated for guiding viewers towards extremist, inappropriate content or hoax/clickbait videos. Our project aims at providing the viewers with diversified recommendation without any bias, presenting the user with a holistic picture in a given context. We follow a two pronged approach to this problem, a traditional content based recommendation system by injecting artificial diversity at the cost of relevance and other by using a game theoretic approach in order to avoid the 'bias' pitfalls present in machine learning models. We have collected data from Youtube API for this project, the lack of user history data metamorphosis the system into a 'cold-start' problem which we tackle by using video metadata as features. Our end result is an interface with user rating capabilities for comparing and contrasting recommendation from Youtube's engine with the video recommendations from our models.