

Algorithmes pour les systèmes de recommandation : un comparatif

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Introduction

Collaborative filtering

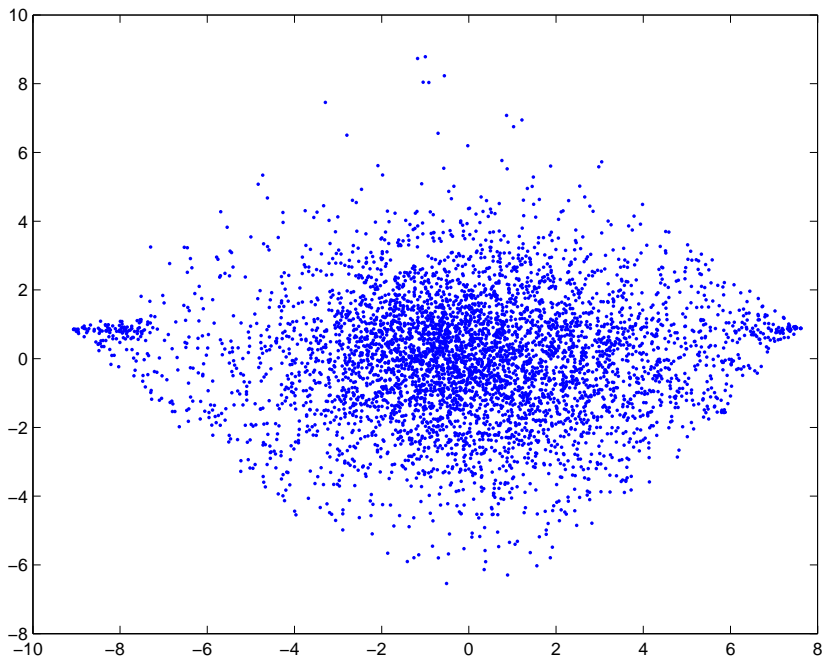
Objectif :

- Requêtes rapides
- Précision
- Ajout rapide d'un nouvel utilisateur
- Démarrage à froid









Algorithme	bonus, p=0.05	Jester, p=0.05	bonus, p=0.2	Jester, p=0.2	bonus, p=0.5
Witness	0.0176	0.0673	0.0149	0.0145	0.0094
UnbiasedWitness	0.0126	0.0414	0.0085	0.0081	0.0051
PerUserAverage	0.0180	0.0471	0.0149	0.0089	0.0093
BiasFromMean	NaN	0.0417	0.0086	0.0081	0.0051
PlainSVD	0.1618	0.1839	0.0943	0.1737	0.0338
ShiftSVD	0.0191	0.0850	0.0106	0.0748	0.0050
UnbiasedSVD	0.0128	0.0683	0.0086	0.0511	0.0048
UserCosSim	0.0125	0.0505	0.0093	0.0426	0.0079
ItemCosSim	NaN	0.0456	0.0092	0.0307	0.0069
SlopeOne	NaN	0.0425	0.0086	0.0081	0.0052
WeightedSlopeOne	NaN	0.0499	0.0085	0.0083	0.0052
BiPolarSlopeOne	NaN	0.0479	0.0093	0.0084	0.0058

Algorithme	p=0.1	p=0.2
Witness	1.0992e-05	2.7715e-06
UnbiasedWitness	6.6646e-06	1.8463e-06
PerUserAverage	9.1804e-06	2.3797e-06
BiasFromMean	8.7602e-06	1.4253e-06
ShiftSVD	7.1533e-06	1.5175e-06
UnbiasedSVD	5.4096e-06	1.5922e-06
UserCosSim	4.7402e-06	1.4364e-06
ItemCosSim	6.6190e-06	1.6920e-06
SlopeOne	7.1207e-06	1.5497e-06
WeightedSlopeOne	5.9259e-06	1.8653e-06
BiPolarSlopeOne	6.6666e-06	2.0102e-06

