**Movies >= 1995 (44 features dim 1)**

Variance = 1.963052

pred[final] – weighted average R2 – 0.113, MSE – 1.741228, MAE – 1.132259

pred[final] – unweighted average R2 – 0.098, MSE – 1.770672, MAE – 1.254478

45 features (dim 1 + cosine distance)

pred[final] – true value (additional attribute cosine distance) R2 – 0.122, MSE – 1.723559, MAE – 1.21322

**All movies (44 features, dim 1)**

Variance = 2.623

pred[final] – weighted average R2 – 0.111, MSE – 2.331, MAE – 1.413327

pred[final] – unweighted average R2 – 0.107, MSE – 2.342, MAE – 1.3634

45 features(dim 1 + cosine distance)

pred[final] – true value R2 – 0.115, MSE – 2.321, MAE – 1.31322

Tried methods

* Beta distribution (alpha, beta)

Solve for alpha/(alpha + beta) = 1/n(Jinni vectors) (mean)

a \* b / (a + b + 1) \* (a + b)^2 = 1/cosine distance (variance)

R2 = -0.312, MSE = 3.44231

Variance = 1 / (1 + e^cosine)

R2 = 0.017, MSE = 2.576

* Bernoulli distribution of jinni vectors, variance p(1-p) = 1/(1 + e^cosine distance)

doesn’t agree with the mean (p = mean of jinni)

Sample with probability p obtained from variance computation

R2 = 0.055, MSE = 2.478