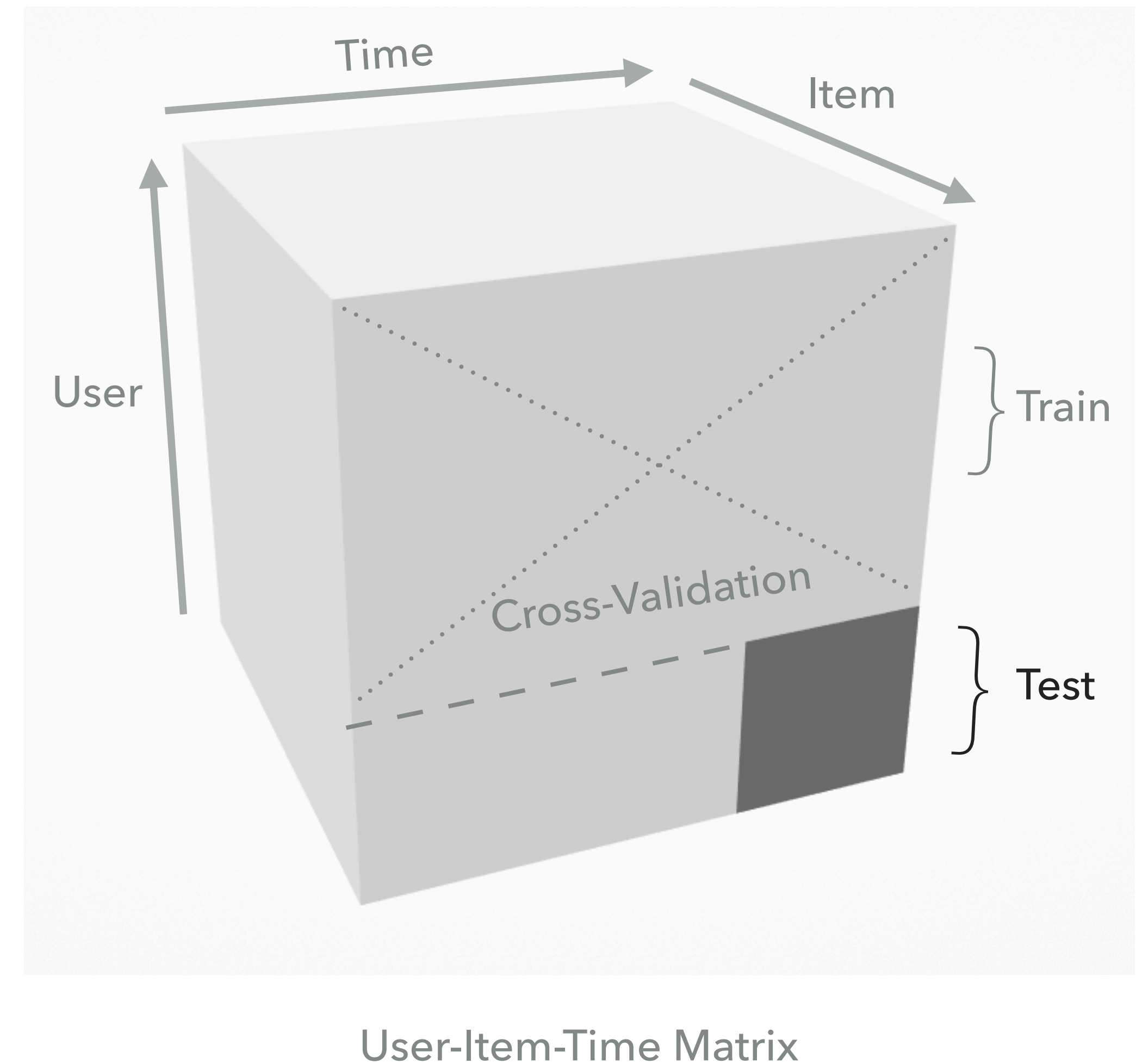


TRAIN-VALID-TEST SPLIT

- ▶ Time: 2016-08-01 ~ 2017-08-01 > 2017-11-01
- ▶ Ratio: 70% / 30%
- ▶ User Criteria:
 - ▶ More than 1 purchase
 - ▶ Test user having at least 1 purchase in- and out-side of test period (cold start)
 - ▶ Stratified on CV (Premium, Gold, Silver)



ALGORITHM

- ▶ Collaborative Filtering:
 - ▶ Matrix decomposition: ALS (Alternating Least Square)
 - ▶ Association rules: FPGrowth (Frequent Pattern)
 - ▶ Neighbourhood based: K-NN
- ▶ *Content Based:*
 - ▶ *Item attribute: Description Vectorization(word2vec)/Topic Model*