

# Work Progress

## kNN Search with Parallel Incremental Query Answering

Jaouhara Chanchaf

Monday Feb 20th, 2023

# 1. Summary

## Done:

AI 2	Measure Kashif recall (using PEXESO as a ground truth) and include it in the query time plots.
------	------------------------------------------------------------------------------------------------

## In progress:

AI 3	Clean PEXESO and Kashif code and update the Readme files.
------	-----------------------------------------------------------

## 2. Average recall and mean query time at $k_i$ Kashif (min max heap) Vs PEXESO

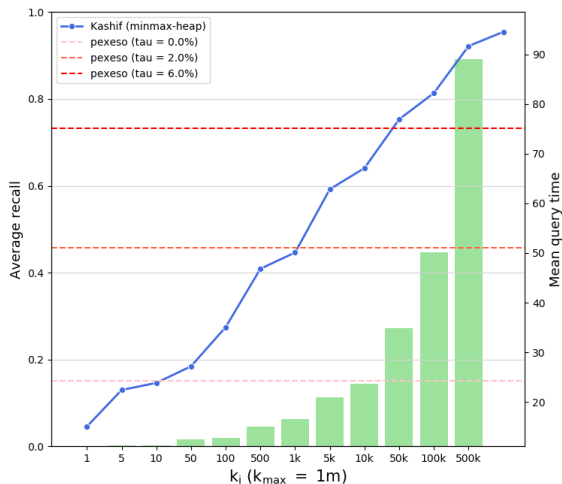


Figure 1: Kashif average recall and mean query time (10 queries, query size = 100, dataset = 100k tables, 490k cols, 5M vectors)

### 3. Discussion

- ▶ Couldn't measure recall at  $k_i = 1m$  due to high memory usage.
- ▶ Kashif out performs PEXESO ( $\tau = 6\%$ ) in query time for  $k_i \leq 50k$ .
- ▶ For  $k_i \leq 50k$  Kashif's recall  $\in [0 - 0.27]$ .