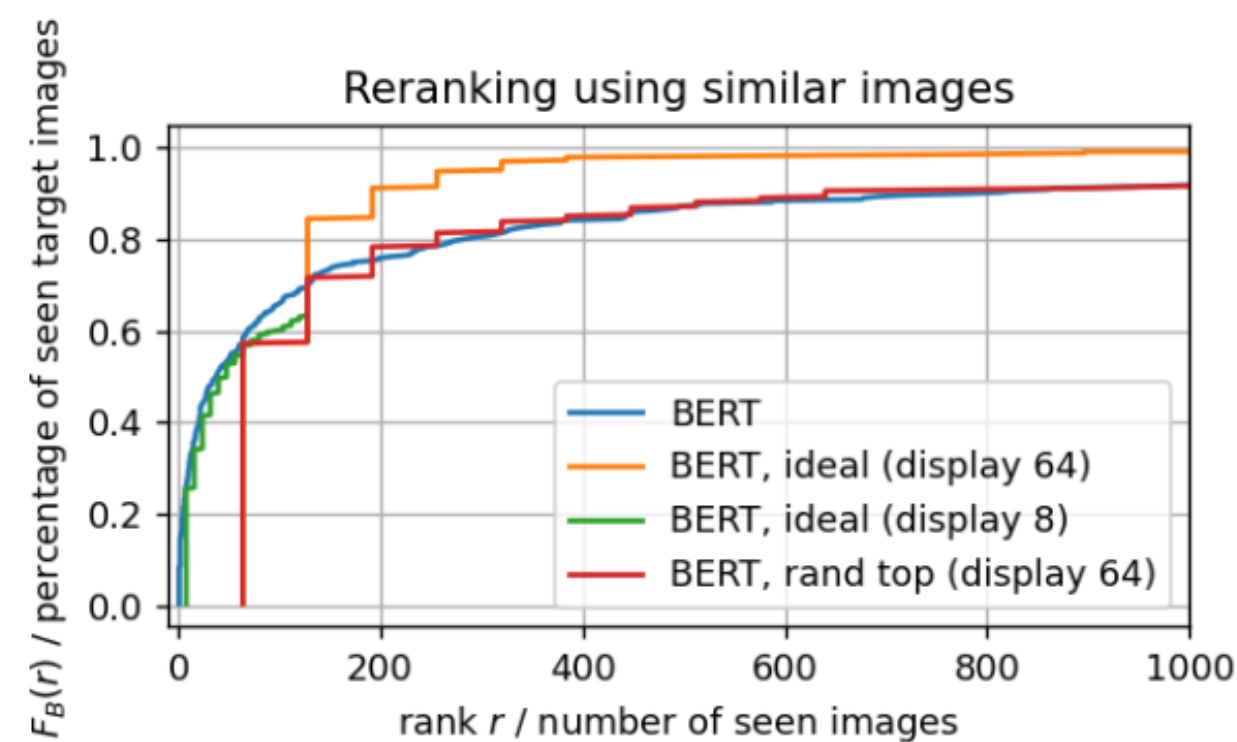
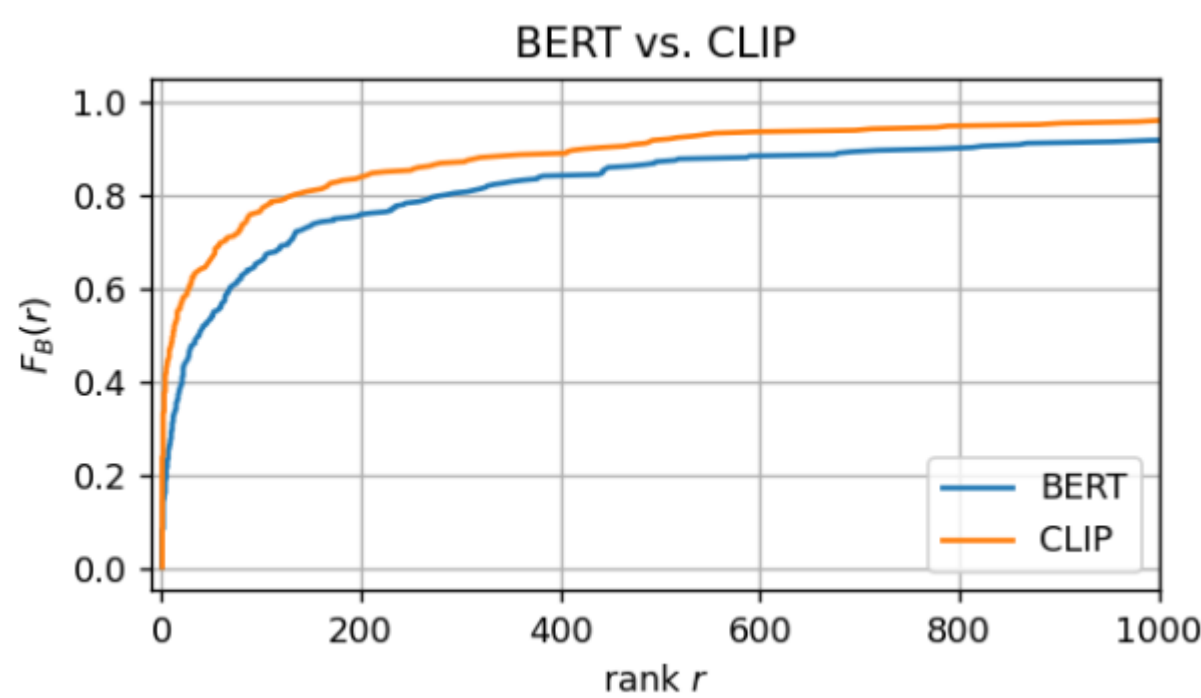


How many neighbours for known-item search?

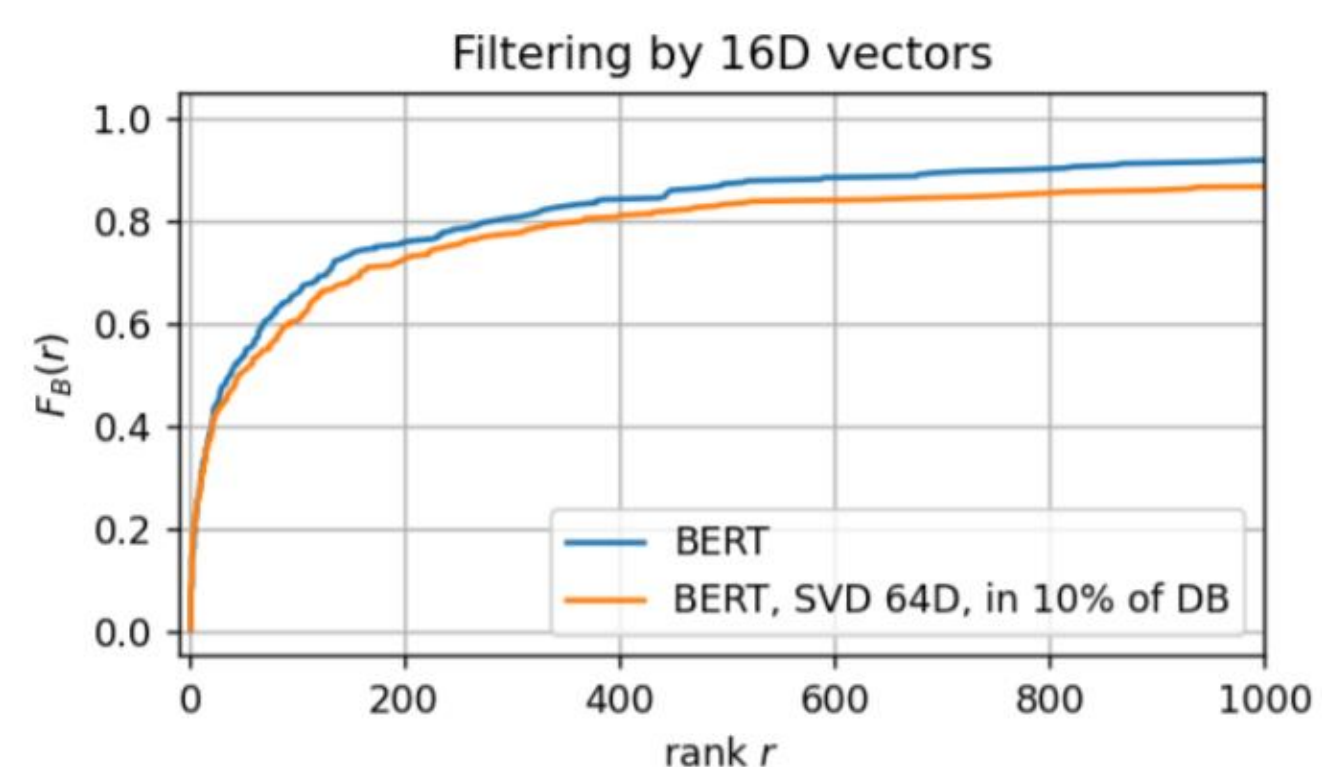
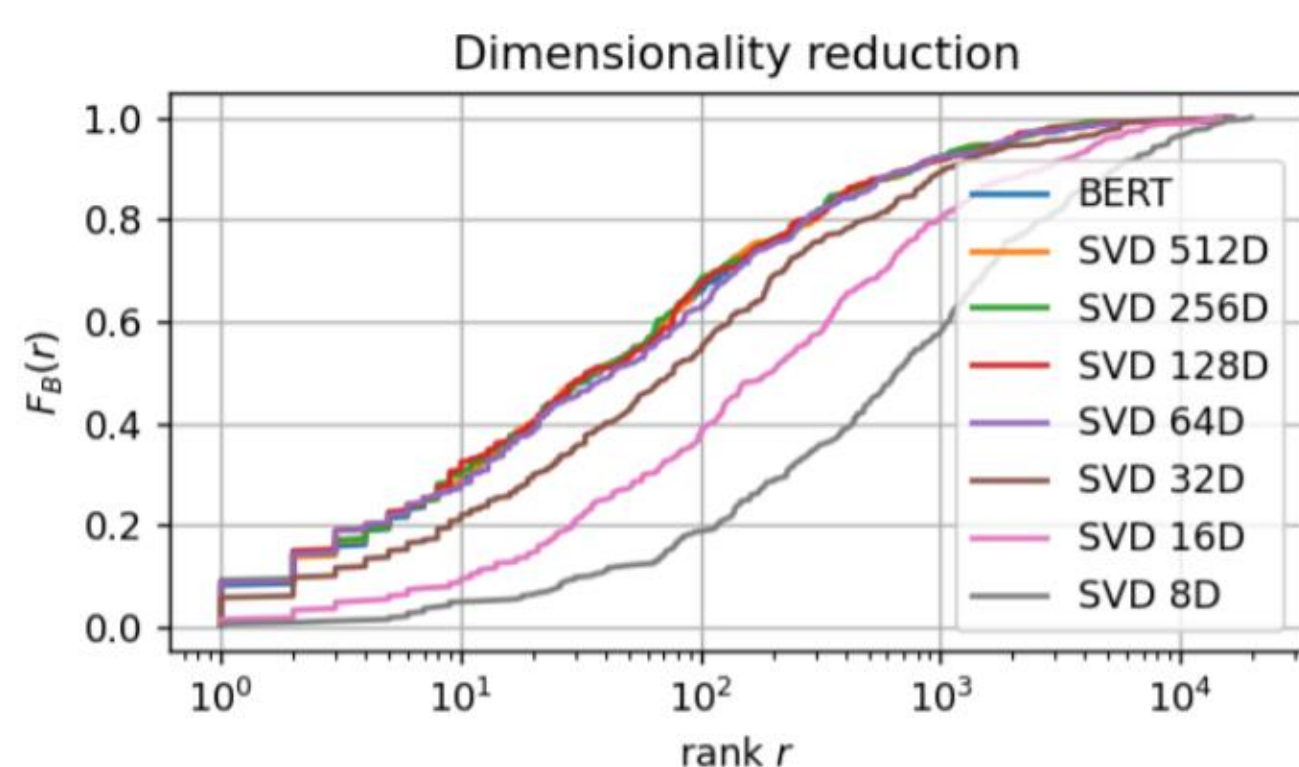
Jakub Lokoč and Tomáš Souček

SIRET research group, FMP Charles University, Prague

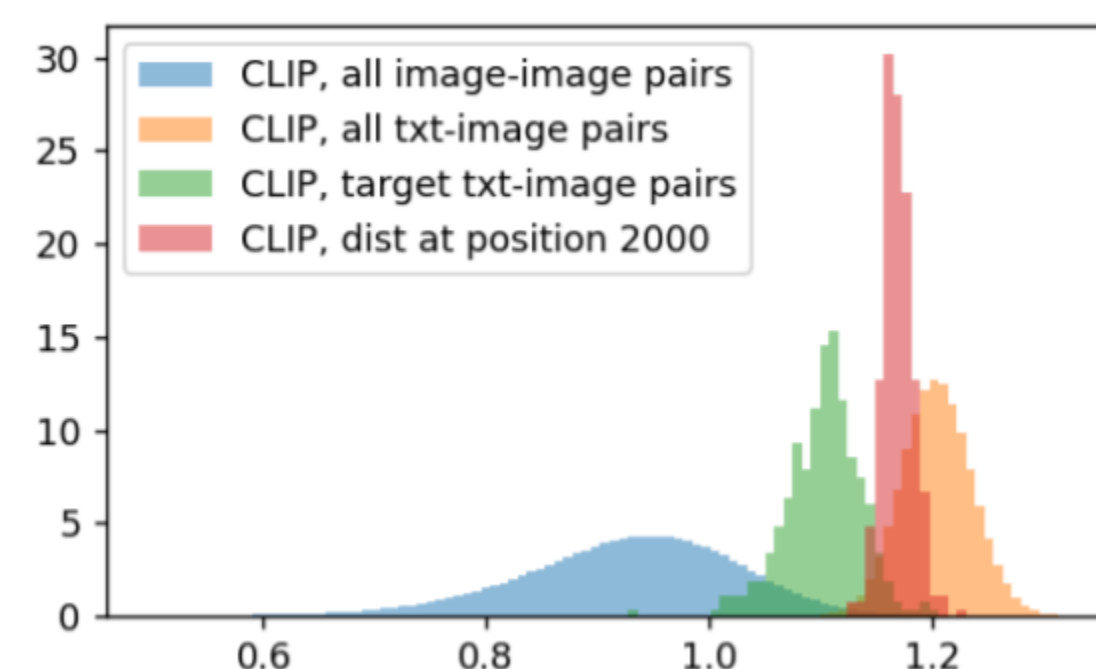
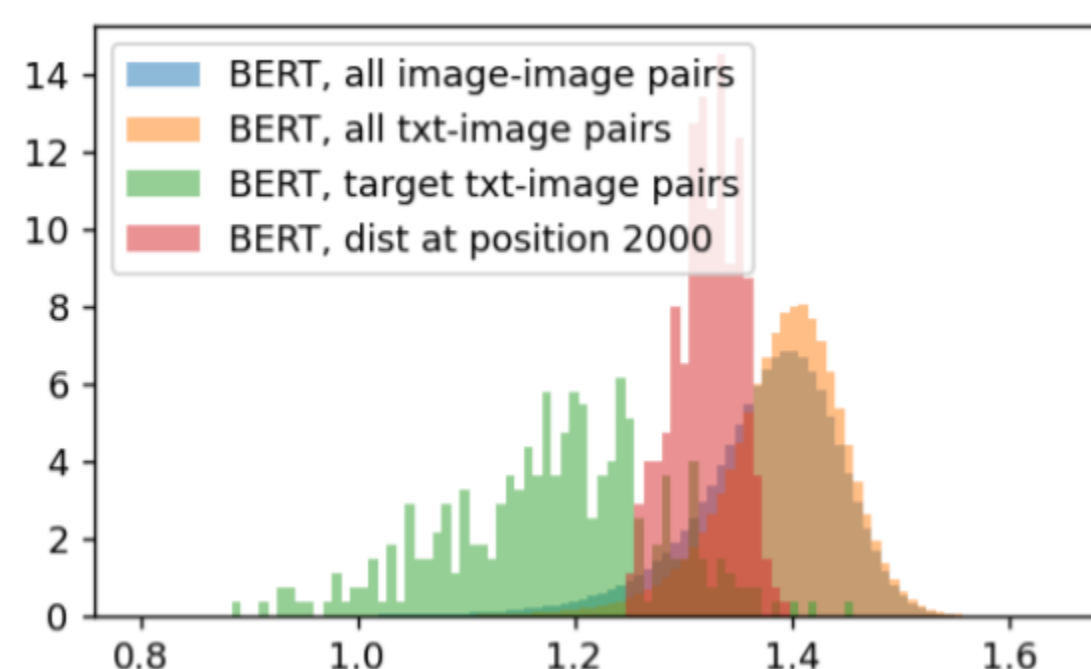
- In a known-item search (KIS) task, users search for one item in a database
- Top KIS systems at Video Browser Showdown use image-text joint embedding
- For text search – how large kNN query result sets are needed for high recall?
- Given a ranking model, $F_B(r)$ shows the number of known items up to rank r



- Experiments with 20K images show that low k is not sufficient for high recall
- kNN based browsing does not outperform text query based ranking
- **An option to get higher recall is to inspect larger candidate sets!**



- A baseline approach to get larger candidate set efficiently is dimension reduction
- SVD can be effectively used to reduce dimension from 2048 to 64 for W2VV++
- Low dimensional vectors (e.g. 16 dimensions) can be used for filtering



- The utilized CLIP and W2VV++ distance spaces have high intrinsic dimensionality
- Can metric access methods outperform the baseline filter and refine approach?