

Learning to Rank

- General solution in optimization framework
 - Input: $\{((q_i, d_1), y_1), ((q_i, d_2), y_2), \dots, ((q_i, d_n), y_n)\}$, where $d_n \in R^N, y_i \in \{0, \dots, L\}$
 - Object: $O = \{P@k, MAP, NDCG\}$
 - Output: $f(q, d) \rightarrow Y$, s.t., $f = \operatorname{argmax}_{f' \subset F} O(f'(q, d), Y)$

| DocID | BM25 | LM | PageRank | Label |
|-------|------|-----|----------|-------|
| 0001 | 1.6 | 1.1 | 0.9 | 0 |
| 0002 | 2.7 | 1.9 | 0.2 | 1 |