



LM-JM



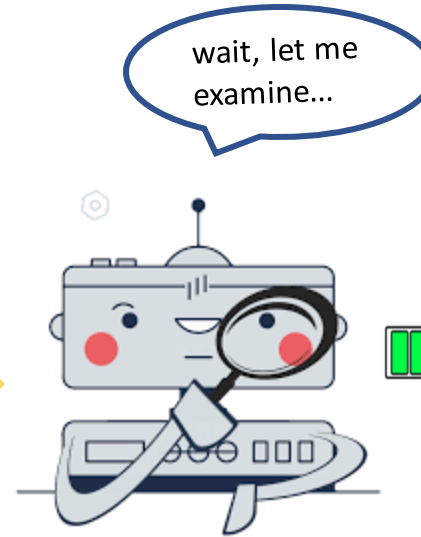
LM-Dirichlet



BM25

EASY : Agoraphobia

DIFFICULT : Black bear attacks



QPP Estimator

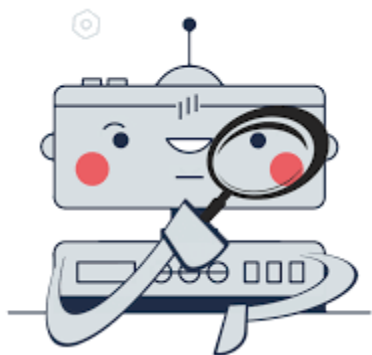


Specific query

or



query not specific



QPP Estimator



Agoraphobia



Specific query (easy)

or



query not specific (hard)

Black bear attacks



Retrieve documents
with the query



Reformulate the query
to improve specificity



Queries



Retrieve documents



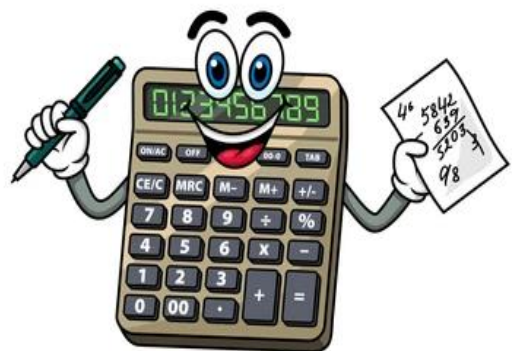
QPP Estimator



Rank queries



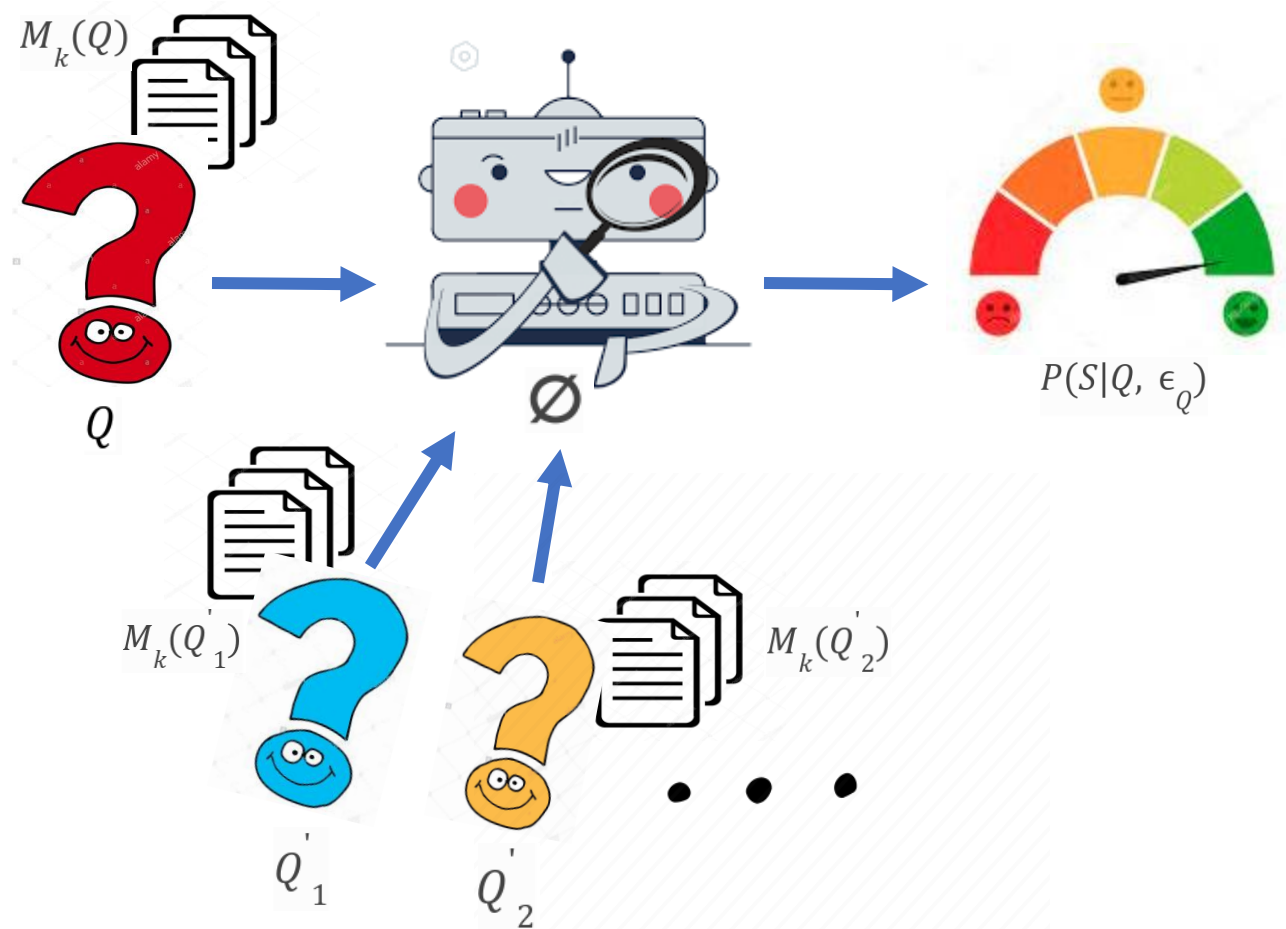
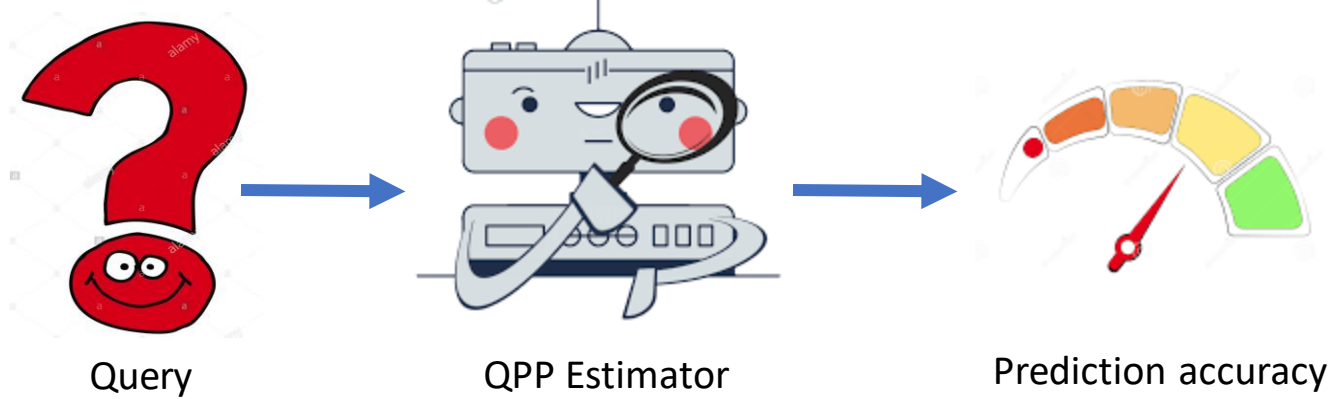
Queries

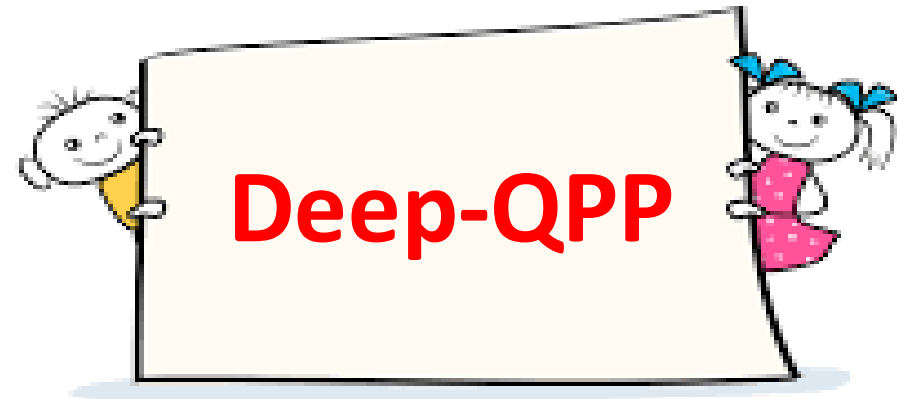


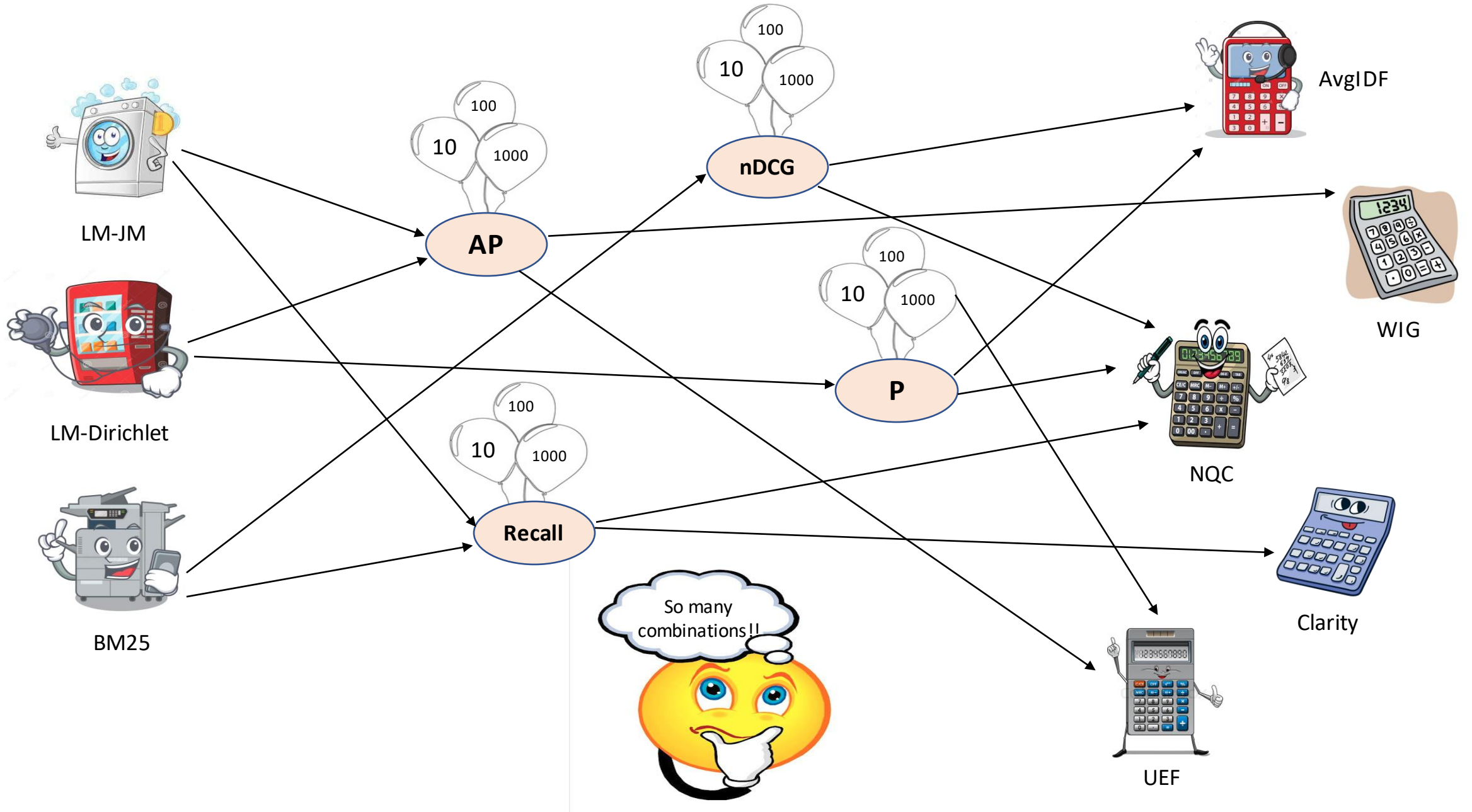
QPP Estimator

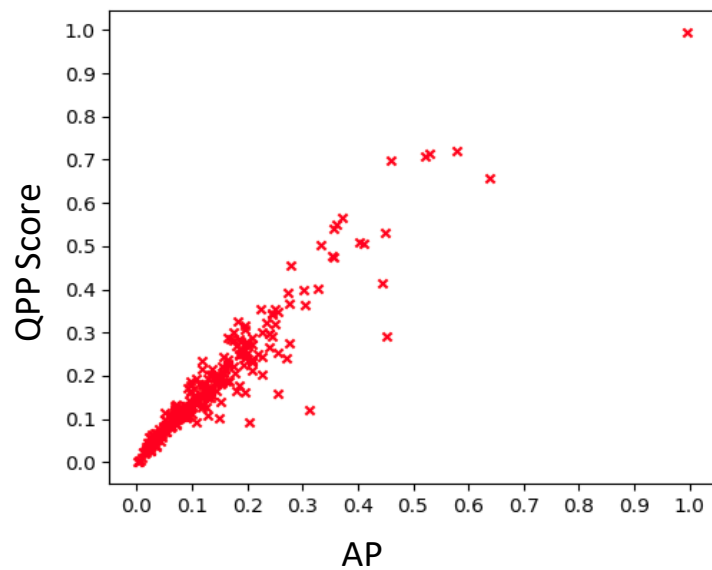
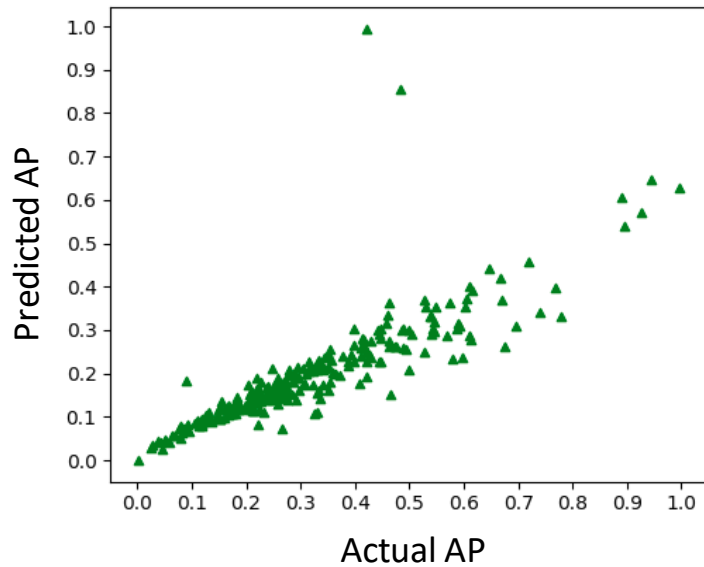
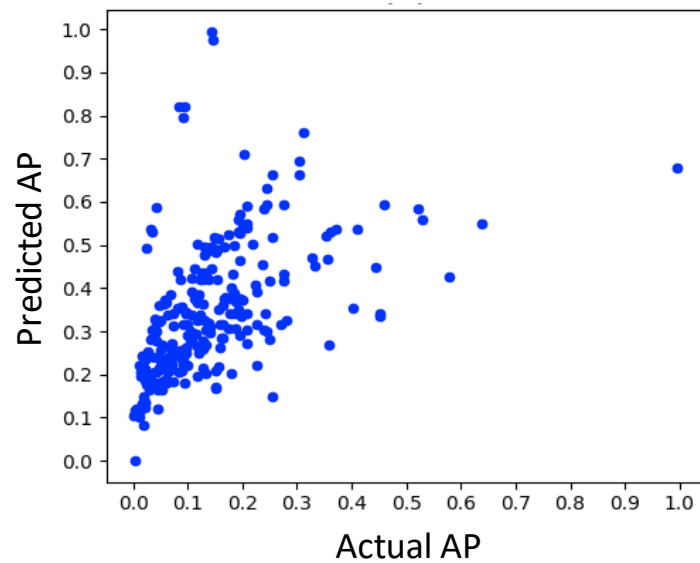
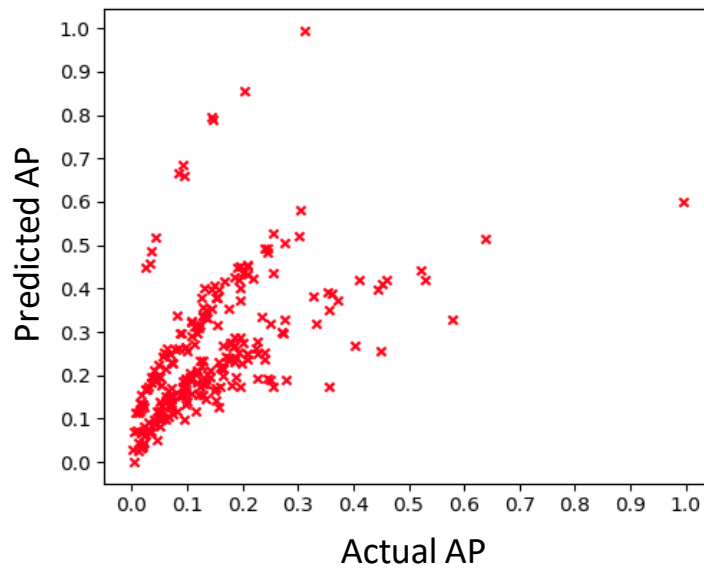
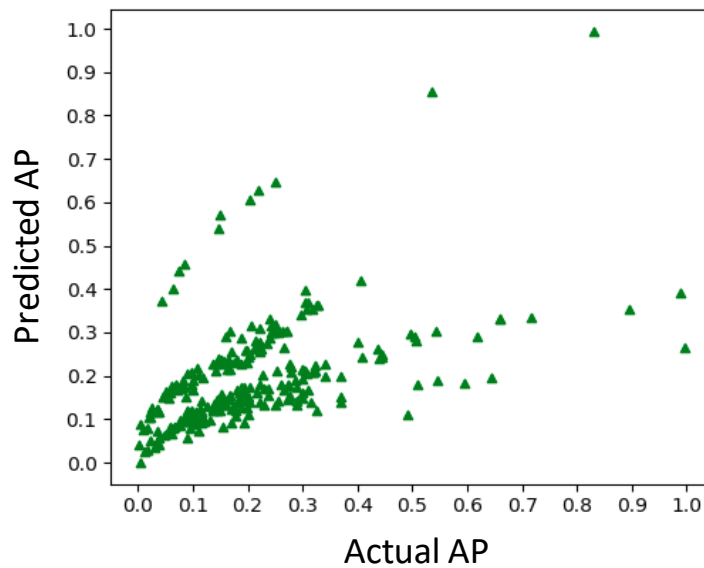
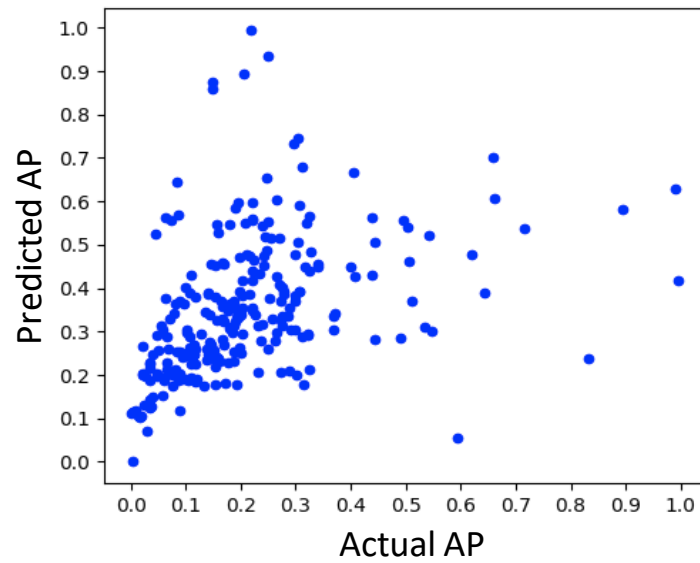


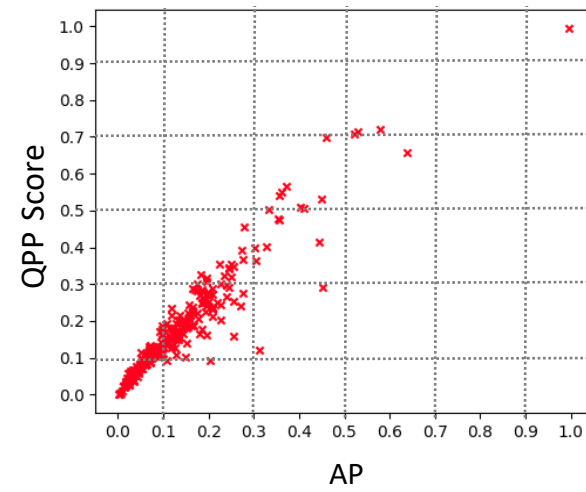
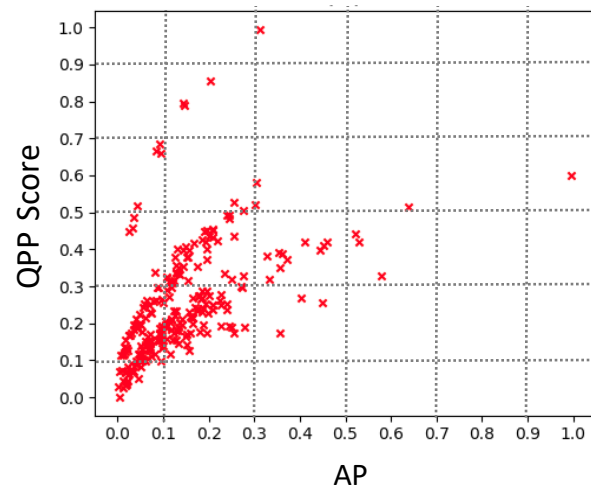
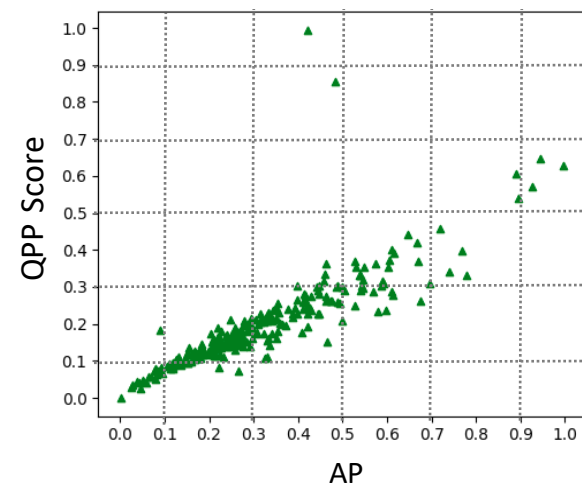
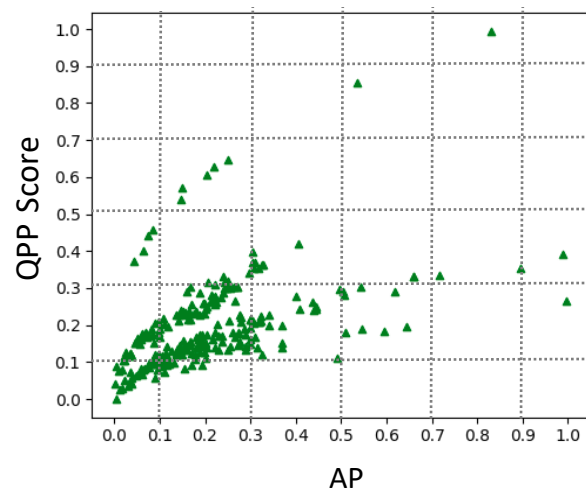
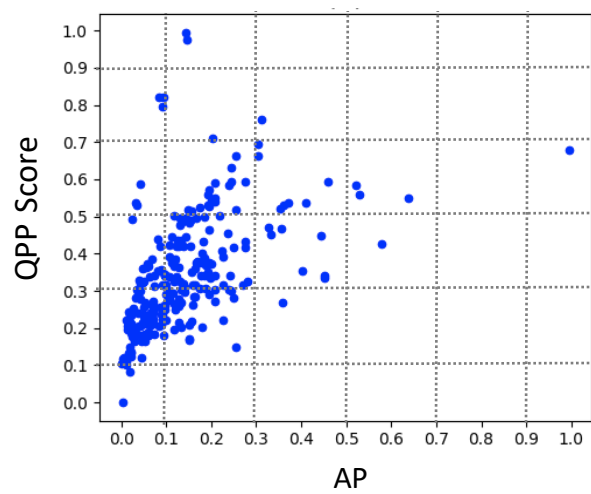
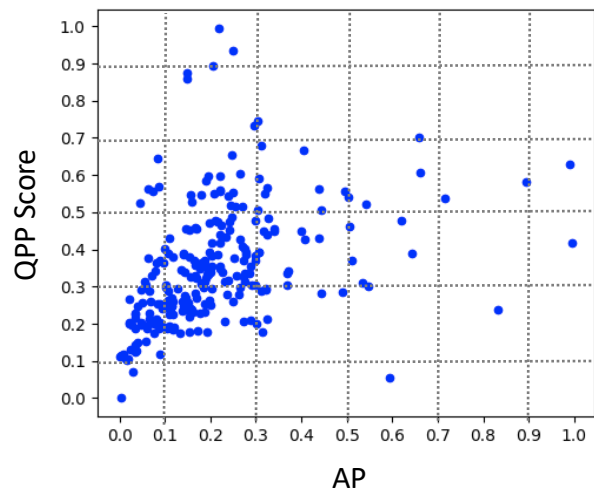
Rank queries

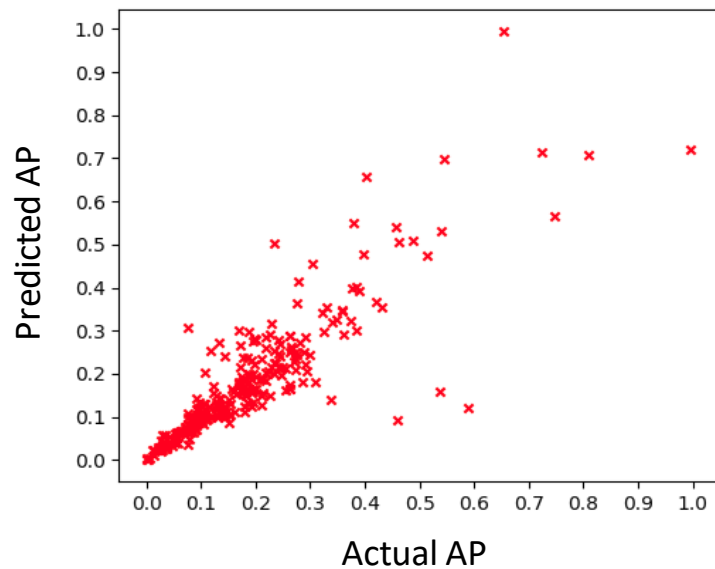
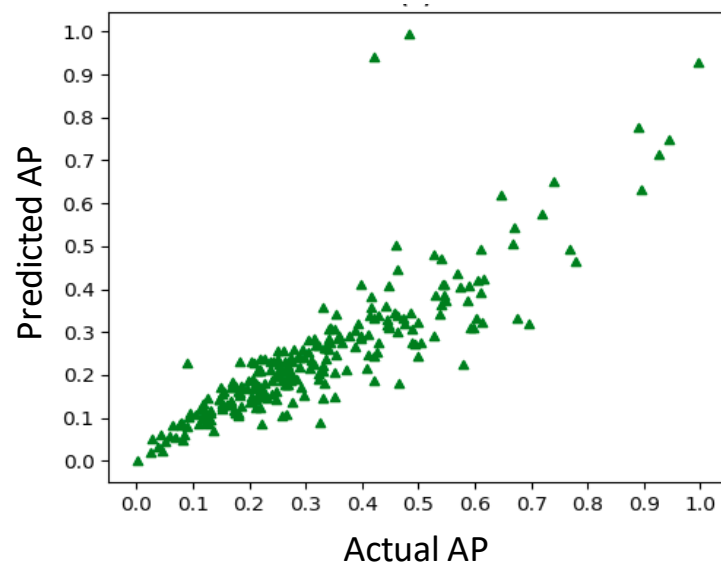
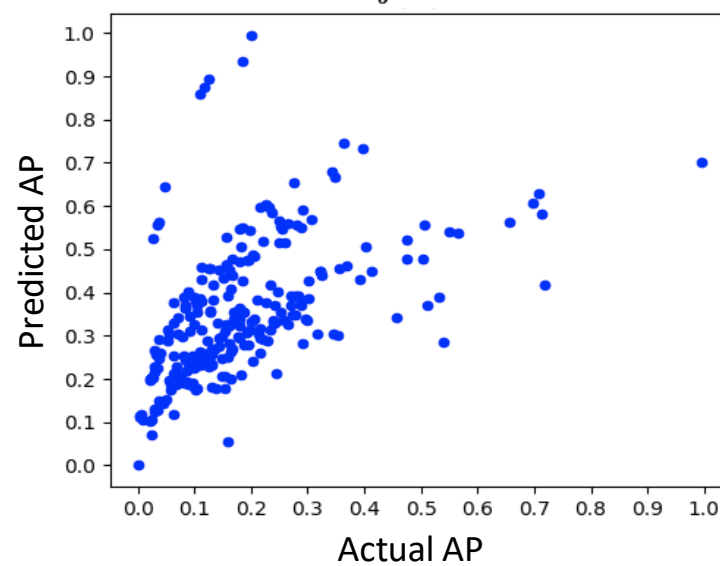
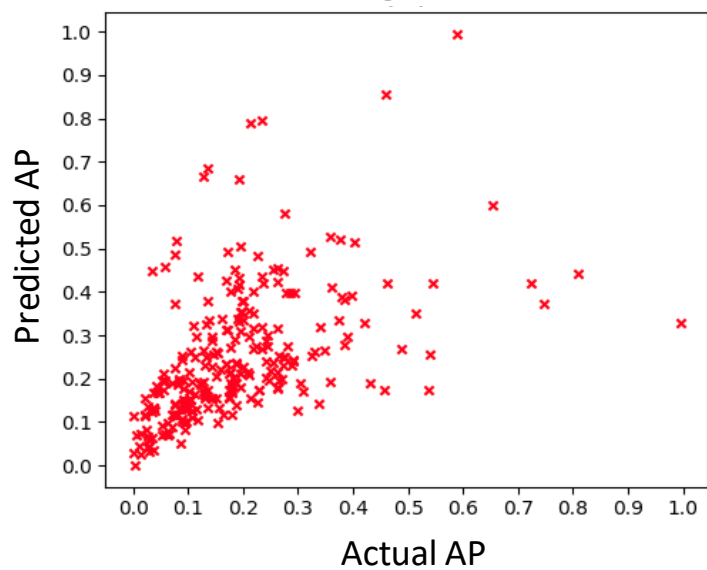
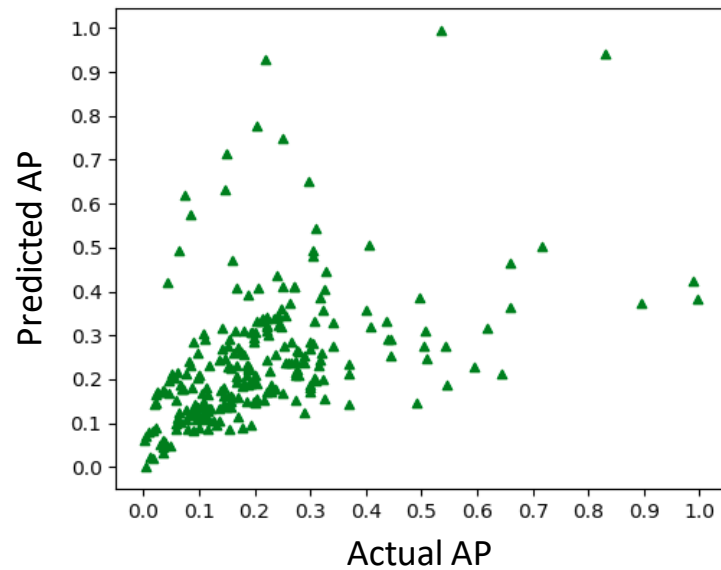






$\langle \text{UEF}(\text{NQC}_{LR}), \text{WRIG}, \text{W2V} \rangle$  $\langle \text{UEF}(\text{NQC}_{LR}), \text{WRIG}, \text{RLM} \rangle$  $\langle \text{UEF}(\text{NQC}_{LR}), \text{WRIG}, \text{UQV} \rangle$  $\langle \text{UEF}(\text{NQC}_{LR}), \text{JM}, \text{W2V} \rangle$  $\langle \text{UEF}(\text{NQC}_{LR}), \text{JM}, \text{RLM} \rangle$  $\langle \text{UEF}(\text{NQC}_{LR}), \text{JM}, \text{UQV} \rangle$ 



$\langle \text{UEF}(\text{NQC}_\sigma), \text{WRIG}, \text{W2V} \rangle$  $\langle \text{UEF}(\text{NQC}_\sigma), \text{WRIG}, \text{RLM} \rangle$  $\langle \text{UEF}(\text{NQC}_\sigma), \text{WRIG}, \text{UQV} \rangle$  $\langle \text{UEF}(\text{NQC}_\sigma), \text{JM}, \text{W2V} \rangle$  $\langle \text{UEF}(\text{NQC}_\sigma), \text{JM}, \text{RLM} \rangle$  $\langle \text{UEF}(\text{NQC}_\sigma), \text{JM}, \text{UQV} \rangle$ 