

Query Variation Performance Prediction for Systematic Reviews

Harrisen Scells¹, Leif Azzopardi², Guido Zuccon¹, Bevan Koopman³

¹Queensland University of Technology, ²Strathclyde University, ³CSIRO

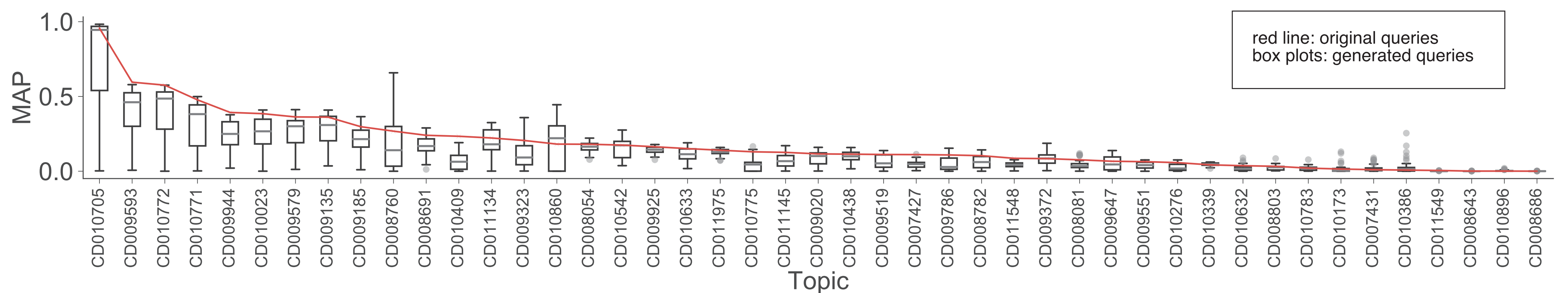


QUERY VARIATIONS

- The reductions, expansions, and modifications of an original query
- Are there more effective query variations?
- Better queries = time and cost savings in systematic review screening process [1, 2]

RESEARCH QUESTION

Can query performance predictors be used to effectively predict query variations?



QVPP TASK

QPP:
Predicting the performance of queries across *different* topics

QVPP:
Predicting the performance of queries within the *same* topic

FINDINGS

- Of the 16 QPPs explored, none were able to consistently predict better variations
- Simple QPPs performed well overall
- While more effective query variations exist, no one predictor was able to consistently identify them

FUTURE WORK

- Domain-specific QPPs that consider features about systematic reviews
- Adopt QPPs for the Boolean queries used in systematic reviews
- Explore the QVPP task outside the systematic review domain

