**Your Name**

**Your Andrew ID**

**Homework 3**

# Statement of Assurance

*You must certify that all of the material that you submit is original work that was done only by you. If your report does not have this statement, it will not be graded.*

# Experiment 1: Baselines

|  |  |  |  |
| --- | --- | --- | --- |
|  | **Ranked**  **Boolean** | **BM25**  **BOW** | **Indri**  **BOW** |
| **P@10** | 0.0000 | 0.0000 | 0.0000 |
| **P@20** | 0.0000 | 0.0000 | 0.0000 |
| **P@30** | 0.0000 | 0.0000 | 0.0000 |
| **MAP** | 0.0000 | 0.0000 | 0.0000 |
| **Time** | mm:ss | mm:ss | mm:ss |

# Experiment 2: Different representations

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
|  | **Indri**  **BOW**  **(body)** | **0.00 url**  **0.00 keywords**  **0.00 title**  **0.00 body**  **0.00 inlink** | **0.00 url**  **0.00 keywords**  **0.00 title**  **0.00 body**  **0.00 inlink** | **0.00 url**  **0.00 keywords**  **0.00 title**  **0.00 body**  **0.00 inlink** | **0.00 url**  **0.00 keywords**  **0.00 title**  **0.00 body**  **0.00 inlink** | **0.00 url**  **0.00 keywords**  **0.00 title**  **0.00 body**  **0.00 inlink** |
| **P@10** | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| **P@20** | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| **P@30** | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| **MAP** | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| **Time** | mm:ss | mm:ss | mm:ss | mm:ss | mm:ss | mm:ss |

Describe your strategy for setting the weights on the different representations.

Discuss any trends that you observe; whether the different representations behaved as you expected; the Precision and Recall characteristics of each representation; how the differences in accuracy (if any) relate to different computational cost; and any other observations that you may have.

# Experiment 3: Sequential dependency models

**Example Query:** Provide your structured query for query “fickle creek farm”.

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
|  | **Indri**  **BOW**  **(body)** | **0.00 AND**  **0.00 NEAR**  **0.00 WINDOW** | **0.00 AND**  **0.00 NEAR**  **0.00 WINDOW** | **0.00 AND**  **0.00 NEAR**  **0.00 WINDOW** | **0.00 AND**  **0.00 NEAR**  **0.00 WINDOW** | **0.00 AND**  **0.00 NEAR**  **0.00 WINDOW** |
| **P@10** | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| **P@20** | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| **P@30** | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| **MAP** | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| **Time** | mm:ss | mm:ss | mm:ss | mm:ss | mm:ss | mm:ss |

Describe how you set the weights for the different components of the sequential dependency model.

Discuss any trends that you observe; whether the more complex query behaved as you expected; whether the improvement in accuracy (if any) is worth the increased computational cost; and any other observations that you may have.

# Experiment 4: Multiple representations + SDMs

**Example Query:** Provide your structured query for query “fickle creek farm”.

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  | **Indri**  **BOW**  **(body)** | **w=1.0**  **(Exp 2)** | **w1** | **w2** | **w3** | **w4** | **w5** | **w=0.0**  **(Exp 3)** |
| **P@10** | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| **P@20** | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| **P@30** | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| **MAP** | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| **Time** | mm:ss | mm:ss | mm:ss | mm:ss | mm:ss | mm:ss | mm:ss | mm:ss |

Discuss any trends that you observe; whether the more complex query behaved as you expected; whether the improvement in accuracy (if any) is worth the increased computational cost; and any other observations that you may have.