Error analysis on a sequence of rankings

2019

- Each item has one or more authors
- Each author belongs to a group
- Each ranking gives an item and thus its author and thus a group exposure
- Exposure is amortized over multiple rankings of **different** queries
- Overall **unfairness** is expressed as the difference between **ideal** and **received** exposure for a sequence of queries
- Overall **utility** is the average utility according to **Expected Reciprocal Rank**

- Since exposure is amortized over **different queries**, we can't easily see which query is difficult
  - According to one participant (the Terrier team) there is little overlap in authors for different queries, so they evaluate performance on a query-by-query basis. This could be an option for us also, **but I haven't yet verified their claim**.

2020

- Each item has one or more authors
- Each author belongs to a group
- Each ranking gives an item and thus its author and thus a group exposure
- Exposure is amortized over multiple rankings of the **same query**
- Overall **unfairness** is expressed as the difference in **expected exposure** (Diaz et al.)

- Since exposure is amortized over the **same query**, we can see which query is difficult