1. Code Attached

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| |  |  |  | | --- | --- | --- | | Method |  |  | | Training NDCG@10 score | Training time in minutes |
| |  | | --- | | RankBoost | |  | |  | |  | | 0.4284 | 1m32.852s |
| |  | | --- | | Coordinate Ascent | |  | |  | |  | | 0.4603 | 6m28.063s |
| |  | | --- | | LambdaMART | |  | |  | |  | | 0.5296 | 0m27.487s |
| |  | | --- | | Random Forests | |  | |  | | 0.5592 | 3m35.510s |

3.

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| |  |  |  | | --- | --- | --- | | Method |  |  | | Testing NDCG@10 score | Testing ERR@10 score |
| |  | | --- | | RankBoost | |  | |  | |  | | 0.3594 | 0.1824 |
| |  | | --- | | Coordinate Ascent | |  | |  | |  | | 0.415 | 0.2322 |
| |  | | --- | | LambdaMART | |  | |  | | 0.4278 | 0.243 |
| |  | | --- | | Random Forests | |  | |  | | 0.4339 | 0.2363 |

Random Forests is the winner among 4 LETOR methods.

4.Histogram(Code Attached)

A screenshot of a cell phone

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