As Tables 1 and 2 show, the tests perform simulations to compare the running time with the help of a distributed parallel computing framework, Ray. We reported the average running time of 5 replications.

|  |  |  |
| --- | --- | --- |
| VFL with Ray (sec) | VFL without Ray (sec) | Time saving by Ray (sec) |
| 2.09 | 27.09 | 25.00 |

Table 1: Average running time of 5 replications with and without Ray.

|  |  |  |  |
| --- | --- | --- | --- |
|  | HFL with Ray (sec) | HFL without Ray (sec) | Time saving by Ray (sec) |
| K=4 | 52.03 | 277.58 | 225.55 |

Table 2: Average running time of 5 replications with and without Ray.