**Table S10.** Hyperparameter sensitivity results, Sub: Subjective, Obj: Objective.

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
|  **Metrics**Weights | **Tickets** | **Motivation** | **Journey** | **Comfort** | **Congestion** | **Accommodation** |
| $$α\_{j}$$ | 0.139 | 0.192 | 0.175 | 0.169 | 0.14 | 0.185 |
| $$β\_{j}$$ | 0.260 | 0.121 | 0.196 | 0.144 | 0.154 | 0.126 |
| Sub10%; Obj 90% | 0.2479 | 0.1281 | 0.1939 | 0.1465 | 0.1526 | 0.1319 |
| Sub 50%; Obj 50% | 0.1995 | 0.1565 | 0.1855 | 0.1565 | 0.147 | 0.1555 |
| Sub 90%; Obj 10% | 0.1511 | 0.1849 | 0.1771 | 0.1665 | 0.1414 | 0.1791 |
| Ours | 0.1901 | 0.1524 | 0.1852 | 0.156 | 0.1468 | 0.1527 |