**RQ1:**

scipy

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| Release | Dynamic features  —  changes | Dynamic features  —  no changes | No dynamic features  —  changes | No dynamic features  —  no changes | P-values | OR |
| 0.7.0 |  |  |  |  | <0.01 | 4.04 |
| 0.7.1 |  |  |  |  | 0.71 | 1.34 |
| 0.7.2 |  |  |  |  | <0.01 | 3.91 |
| 0.9.0 |  |  |  |  | <0.01 | 2.05 |
| 0.10.0 |  |  |  |  | 0.05 | 1.50 |
| 0.11.0 |  |  |  |  | 0.17 | 4.26 |
| 0.12.0 |  |  |  |  | <0.01 | 3.30 |
| 0.13.2 |  |  |  |  | <0.01 | 3.62 |
| 0.14.0 |  |  |  |  | 0.14 | 1.69 |

**RQ2**:

scipy

|  |  |  |
| --- | --- | --- |
| Release | M-W | Cohen d |
| 0.7.0 | <0.01 | 0.5523617 (medium) |
| 0.7.1 | 0.7338 | -0.07274432(negligible) |
| 0.7.2 | <0.01 | 0.4588355 (small) |
| 0.9.0 | <0.01 | 0.4448256 (small) |
| 0.10.0 | 0.01 | 0.3332086 (small) |
| 0.11.0 | 0.1365 | 0.3621901 (small) |
| 0.12.0 | <0.01 | 0.3910162 (small) |
| 0.13.2 | <0.01 | 0.4779611 (small) |
| 0.14.0 | 0.10 | 0.7068229 (medium) |

**RQ3**:

scipy

|  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Version ID  Dynamic Features | 0.7.0 | 0.7.1 | 0.7.2 | 0.9.0 | 0.10.0 | 0.11.0 | 0.12.0 | 0.13.2 | 0.14.0 |
| introspection | <0.01 | 0.51 | <0.01 | <0.01 | <0.01 | 0.27 | <0.01 | <0.01 | <0.01 |
| object changes | 0.97 | 0.40 | 0.16 | 0.60 | 0.87 | 0.83 | 0.57 | 0.10 | 0.33 |
| code generation | 0.04 | 0.67 | 0.18 | 0.64 | 0.94 | 0.73 | 0.34 | 0.02 | 0.46 |
| library loading | 0.44 | 0.84 | 0.90 | 0.49 | 0.10 | 0.86 | 0.65 | 0.72 | 0.59 |