**1. Identificación general**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **dataset** | **clase** | **train\_original** | **objetivo\_balance** | **estado** | **motivo\_sin\_sinteticas** |
| shuttle | 1 | 36469 | 29175 | no se sobremuestrea | sin\_faltante(actual>=objetivo) |
| shuttle | 2 | 40 | 29175 | sobremuestreada | ok |
| shuttle | 3 | 137 | 29175 | sobremuestreada | ok |
| shuttle | 4 | 7122 | 29175 | sobremuestreada | insuficientes\_filtradas |
| shuttle | 5 | 2614 | 29175 | sobremuestreada | insuficientes\_filtradas |
| shuttle | 6 | 8 | 29175 | sobremuestreada | insuficientes\_filtradas |
| shuttle | 7 | 10 | 29175 | sobremuestreada | ok |

**2. Resultados de tamaño y ratios**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **clase** | **muestras\_sinteticas\_generadas** | **total\_original** | **total\_resampled** | **ratio\_original** | **ratio\_resampled** |
| 1 | 0 | 46400 | 46400 | 0.785970 | 0.785970 |
| 2 | 29135 | 46400 | 75535 | 0.000862 | 0.386245 |
| 3 | 29038 | 46400 | 104573 | 0.002953 | 0.278992 |
| 4 | 0 | 46400 | 104573 | 0.153491 | 0.068106 |
| 5 | 0 | 46400 | 104573 | 0.056336 | 0.024997 |
| 6 | 0 | 46400 | 104573 | 0.000172 | 0.000077 |
| 7 | 29165 | 46400 | 133738 | 0.000216 | 0.218150 |

**3. Métricas internas de riesgo/densidad**

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **clase** | **n\_candidatas** | **n\_filtradas** | **riesgo\_medio** | **riesgo\_std** | **densidad\_media** | **vecinos\_validos\_promedio** |
| 2 | 40 | 7 | 0.4571 | 0.0904 | 1.0000 | 2.0 |
| 3 | 137 | 9 | 0.5333 | 0.0943 | 0.9708 | 2.0 |
| 4 | 7122 | 1 | 0.4000 | 0.0000 | 0.9985 | 2.0 |
| 5 | 2614 | 0 | — | — | 0.9871 | — |
| 6 | 8 | 2 | 0.4000 | 0.0000 | 0.0500 | 2.0 |
| 7 | 10 | 6 | 0.4333 | 0.0745 | 0.0000 | 2.0 |

**4. Parámetros de configuración**

|  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **clase** | **umbral\_densidad** | **umbral\_entropia** | **percentil\_densidad** | **percentil\_riesgo** | **criterio\_pureza** | **tecnica\_sobremuestreo** | **factor\_equilibrio** | **random\_state** | **modo\_espacial** | **timestamp** |
| 1 | — | — | 75.0 | 25.0 | proporcion | PCSMOTE | 0.8 | 42 | 2d | 2025-08-20T00:17:06.934975 |
| 2 | 1.0 | — | 75.0 | 25.0 | proporcion | PCSMOTE | 0.8 | 42 | 2d | 2025-08-20T00:17:13.902115 |
| 3 | 1.0 | — | 75.0 | 25.0 | proporcion | PCSMOTE | 0.8 | 42 | 2d | 2025-08-20T00:17:20.552499 |
| 4 | 1.0 | — | 75.0 | 25.0 | proporcion | PCSMOTE | 0.8 | 42 | 2d | 2025-08-20T00:17:22.902836 |
| 5 | 1.0 | — | 75.0 | 25.0 | proporcion | PCSMOTE | 0.8 | 42 | 2d | 2025-08-20T00:17:23.820026 |
| 6 | 0.05 | — | 75.0 | 25.0 | proporcion | PCSMOTE | 0.8 | 42 | 2d | 2025-08-20T00:17:24.048393 |
| 7 | 0.0 | — | 75.0 | 25.0 | proporcion |  |  |  |  |  |