|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
|  | **género** | **edad** | **compras\_miles** | **horas\_online** | **num\_correos** | **privacidad** |
| Cliente 1 | femenino | 26 | 90 | 20 | 4 | si |
| Cliente 2 | masculino | 51 | 135 | 10 | 2 | no |
| Cliente 3 | masculino | 29 | 80 | 10 | 3 | si |
| Cliente 4 | femenino | 45 | 120 | 15 | 3 | si |
| Cliente 5 | femenino | 31 | 95 | 20 | 5 | si |
| Cliente 6 | masculino | 25 | 55 | 25 | 5 | si |
| Cliente 7 | masculino | 37 | 100 | 10 | 1 | no |
| Cliente 8 | masculino | 41 | 65 | 8 | 2 | no |
| Cliente 9 | femenino | 26 | 85 | 12 | 1 | no |

Matriz binamizada

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
|  | **género** | **edad** | **compras\_miles** | **horas\_online** | **num\_correos** | **privacidad** |
| C1 | 1 | 26 | 90 | 20 | 4 | 1 |
| C2 | 2 | 51 | 135 | 10 | 2 | 2 |
| C3 | 2 | 29 | 80 | 10 | 3 | 1 |
| C4 | 1 | 45 | 120 | 15 | 3 | 1 |
| C5 | 1 | 31 | 95 | 20 | 5 | 1 |
| C6 | 2 | 25 | 55 | 25 | 5 | 1 |
| C7 | 2 | 37 | 100 | 10 | 1 | 2 |
| C8 | 2 | 41 | 65 | 8 | 2 | 2 |
| Ce 9 | 1 | 26 | 85 | 12 | 1 | 2 |

Cálculos con formula euclidiana

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| Cliente 1 | 1 | 26 | 90 | 20 | 4 | 1 |
| Cliente 2 | 2 | 51 | 135 | 10 | 2 | 2 |
|  | 2756 |  |  |  |  |  |
|  | 52,4976 |  |  |  |  |  |
| Cliente 1 | 1 | 26 | 90 | 20 | 4 | 1 |
| Cliente 3 | 2 | 29 | 80 | 10 | 3 | 1 |
|  | 211 |  |  |  |  |  |
|  | 14,5258 |  |  |  |  |  |
| Cliente 1 | 1 | 26 | 90 | 20 | 4 | 1 |
| Cliente 4 | 1 | 45 | 120 | 15 | 3 | 1 |
|  | 1287 |  |  |  |  |  |
|  | 35,8748 |  |  |  |  |  |
| Cliente 1 | 1 | 26 | 90 | 20 | 4 | 1 |
| Cliente 5 | 1 | 31 | 95 | 20 | 5 | 1 |
|  | 51 |  |  |  |  |  |
|  | 7,14143 |  |  |  |  |  |
| Cliente 1 | 1 | 26 | 90 | 20 | 4 | 1 |
| Cliente 6 | 2 | 25 | 55 | 25 | 5 | 1 |
|  | 1253 |  |  |  |  |  |
|  | 35,3977 |  |  |  |  |  |
| Cliente 1 | 1 | 26 | 90 | 20 | 4 | 1 |
| Cliente 7 | 2 | 37 | 100 | 10 | 1 | 2 |
|  | 332 |  |  |  |  |  |
|  | 18,2209 |  |  |  |  |  |
| Cliente 1 | 1 | 26 | 90 | 20 | 4 | 1 |
| Cliente 8 | 2 | 41 | 65 | 8 | 2 | 2 |
|  | 1000 |  |  |  |  |  |
|  | 31,6228 |  |  |  |  |  |
| Cliente 1 | 1 | 26 | 90 | 20 | 4 | 1 |
| Cliente 9 | 1 | 26 | 85 | 12 | 1 | 2 |
|  | 99 |  |  |  |  |  |
|  | 9,94987 |  |  |  |  |  |
| Cliente 2 | 2 | 51 | 135 | 10 | 2 | 2 |
| Cliente 3 | 2 | 29 | 80 | 10 | 3 | 1 |
|  | 3511 |  |  |  |  |  |
|  | 59,2537 |  |  |  |  |  |
| Cliente 2 | 2 | 51 | 135 | 10 | 2 | 2 |
| Cliente 4 | 1 | 45 | 120 | 15 | 3 | 1 |
|  | 289 |  |  |  |  |  |
|  | 17 |  |  |  |  |  |
| Cliente 2 | 2 | 51 | 135 | 10 | 2 | 2 |
| Cliente 5 | 1 | 31 | 95 | 20 | 5 | 1 |
|  | 2111 |  |  |  |  |  |
|  | 45,9456 |  |  |  |  |  |
| Cliente 2 | 2 | 51 | 135 | 10 | 2 | 2 |
| Cliente 6 | 2 | 25 | 55 | 25 | 5 | 1 |
|  | 7311 |  |  |  |  |  |
|  | 85,5044 |  |  |  |  |  |
| Cliente 2 | 2 | 51 | 135 | 10 | 2 | 2 |
| Cliente 7 | 2 | 37 | 100 | 10 | 1 | 2 |
|  | 1422 |  |  |  |  |  |
|  | 37,7094 |  |  |  |  |  |
| Cliente 2 | 2 | 51 | 135 | 10 | 2 | 2 |
| Cliente 8 | 2 | 41 | 65 | 8 | 2 | 2 |
|  | 5004 |  |  |  |  |  |
|  | 70,739 |  |  |  |  |  |
| Cliente 2 | 2 | 51 | 135 | 10 | 2 | 2 |
| Cliente 9 | 1 | 26 | 85 | 12 | 1 | 2 |
|  | 3131 |  |  |  |  |  |
|  | 55,9553 |  |  |  |  |  |
| Cliente 3 | 2 | 29 | 80 | 10 | 3 | 1 |
| Cliente 4 | 1 | 45 | 120 | 15 | 3 | 1 |
|  | 1882 |  |  |  |  |  |
|  | 43,382 |  |  |  |  |  |
| Cliente 3 | 2 | 29 | 80 | 10 | 3 | 1 |
| Cliente 5 | 1 | 31 | 95 | 20 | 5 | 1 |
|  | 334 |  |  |  |  |  |
|  | 18,2757 |  |  |  |  |  |
| Cliente 3 | 2 | 29 | 80 | 10 | 3 | 1 |
| Cliente 6 | 2 | 25 | 55 | 25 | 5 | 1 |
|  | 870 |  |  |  |  |  |
|  | 29,4958 |  |  |  |  |  |
| Cliente 3 | 2 | 29 | 80 | 10 | 3 | 1 |
| Cliente 7 | 2 | 37 | 100 | 10 | 1 | 2 |
|  | 469 |  |  |  |  |  |
|  | 21,6564 |  |  |  |  |  |
| Cliente 3 | 2 | 29 | 80 | 10 | 3 | 1 |
| Cliente 8 | 2 | 41 | 65 | 8 | 2 | 2 |
|  | 375 |  |  |  |  |  |
|  | 19,3649 |  |  |  |  |  |
| Cliente 3 | 2 | 29 | 80 | 10 | 3 | 1 |
| Cliente 9 | 1 | 26 | 85 | 12 | 1 | 2 |
|  | 44 |  |  |  |  |  |
|  | 6,63325 |  |  |  |  |  |
| Cliente 4 | 1 | 45 | 120 | 15 | 3 | 1 |
| Cliente 5 | 1 | 31 | 95 | 20 | 5 | 1 |
|  | 850 |  |  |  |  |  |
|  | 29,1548 |  |  |  |  |  |
| Cliente 4 | 1 | 45 | 120 | 15 | 3 | 1 |
| Cliente 6 | 2 | 25 | 55 | 25 | 5 | 1 |
|  | 4730 |  |  |  |  |  |
|  | 68,775 |  |  |  |  |  |
| Cliente 4 | 1 | 45 | 120 | 15 | 3 | 1 |
| Cliente 7 | 2 | 37 | 100 | 10 | 1 | 2 |
|  | 495 |  |  |  |  |  |
|  | 22,2486 |  |  |  |  |  |
| Cliente 4 | 1 | 45 | 120 | 15 | 3 | 1 |
| Cliente 8 | 2 | 41 | 65 | 8 | 2 | 2 |
|  | 3093 |  |  |  |  |  |
|  | 55,6147 |  |  |  |  |  |
| Cliente 4 | 1 | 45 | 120 | 15 | 3 | 1 |
| Cliente 9 | 1 | 26 | 85 | 12 | 1 | 2 |
|  | 1600 |  |  |  |  |  |
|  | 40 |  |  |  |  |  |
| Cliente 5 | 1 | 31 | 95 | 20 | 5 | 1 |
| Cliente 6 | 2 | 25 | 55 | 25 | 5 | 1 |
|  | 1662 |  |  |  |  |  |
|  | 40,7676 |  |  |  |  |  |
| Cliente 5 | 1 | 31 | 95 | 20 | 5 | 1 |
| Cliente 7 | 2 | 37 | 100 | 10 | 1 | 2 |
|  | 179 |  |  |  |  |  |
|  | 13,3791 |  |  |  |  |  |
| Cliente 5 | 1 | 31 | 95 | 20 | 5 | 1 |
| Cliente 8 | 2 | 41 | 65 | 8 | 2 | 2 |
|  | 1155 |  |  |  |  |  |
|  | 33,9853 |  |  |  |  |  |
| Cliente 5 | 1 | 31 | 95 | 20 | 5 | 1 |
| Cliente 9 | 1 | 26 | 85 | 12 | 1 | 2 |
|  | 206 |  |  |  |  |  |
|  | 14,3527 |  |  |  |  |  |
| Cliente 6 | 2 | 25 | 55 | 25 | 5 | 1 |
| Cliente 7 | 2 | 37 | 100 | 10 | 1 | 2 |
|  | 2411 |  |  |  |  |  |
|  | 49,1019 |  |  |  |  |  |
| Cliente 6 | 2 | 25 | 55 | 25 | 5 | 1 |
| Cliente 8 | 2 | 41 | 65 | 8 | 2 | 2 |
|  | 655 |  |  |  |  |  |
|  | 25,593 |  |  |  |  |  |
| Cliente 6 | 2 | 25 | 55 | 25 | 5 | 1 |
| Cliente 9 | 1 | 26 | 85 | 12 | 1 | 2 |
|  | 1088 |  |  |  |  |  |
|  | 32,9848 |  |  |  |  |  |
| Cliente 7 | 2 | 37 | 100 | 10 | 1 | 2 |
| Cliente 8 | 2 | 41 | 65 | 8 | 2 | 2 |
|  | 1246 |  |  |  |  |  |
|  | 35,2987 |  |  |  |  |  |
| Cliente 7 | 2 | 37 | 100 | 10 | 1 | 2 |
| Cliente 9 | 1 | 26 | 85 | 12 | 1 | 2 |
|  | 351 |  |  |  |  |  |
|  | 18,735 |  |  |  |  |  |
| Cliente 8 | 2 | 41 | 65 | 8 | 2 | 2 |
| Cliente 9 | 1 | 26 | 85 | 12 | 1 | 2 |
|  | 643 |  |  |  |  |  |
|  | 25,3574 |  |  |  |  |  |

Matriz distancia completa

|  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  | c1 | c2 | c3 | c4 | c5 | c6 | c7 | c8 | c9 |
| C1 | 0 | 52,4976 | 14.5258 | 35.8748 | 7.14143 | 35.3977 | 18.2209 | 31.9228 | 9.94987 |
| C2 |  | 0 | 59.2537 | 17 | 45.9456 | 85.5044 | 37.7094 | 70.739 | 55.9553 |
| C3 |  |  | 0 | 43.382 | 18.2787 | 29.4958 | 21.6564 | 19.3649 | 6.6333 |
| C4 |  |  |  | 0 | 29.1548 | 68.78 | 22.25 | 55.62 | 40 |
| C5 |  |  |  |  | 0 | 40.77 | 13.38 | 33.99 | 14.35 |
| C6 |  |  |  |  |  | 0 | 49.1019 | 25.59 | 32.9848 |
| C7 |  |  |  |  |  |  | 0 | 35.2987 | 18.74 |
| C8 |  |  |  |  |  |  |  | 0 | 25.36 |
| C9 |  |  |  |  |  |  |  |  | 0 |

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  | c1 | c2 | c3,c9 | c4 | c5 | c6 | c7 | c8 |
| C1 | 0 | 52,4976 | 14.5258 | 35.8748 | 7.14143 | 35.3977 | 18.2209 | 31.9228 |
| C2 |  | 0 | 59.2537 | 17 | 45.9456 | 85.5044 | 37.7094 | 70.739 |
| C3, c9 |  |  | 0 | 43.382 | 18.2787 | 29.4958 | 21.6564 | 19.3649 |
| C4 |  |  |  | 0 | 29.1548 | 68.78 | 22.25 | 55.62 |
| C5 |  |  |  |  | 0 | 40.77 | 13.38 | 33.99 |
| C6 |  |  |  |  |  | 0 | 49.1019 | 25.59 |
| C7 |  |  |  |  |  |  | 0 | 35.2987 |
| C8 |  |  |  |  |  |  |  | 0 |

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
|  | c1, c5 | c2 | c3,c9 | c4 | c6 | c7 | c8 |
| C1,c5 | 0 | 52.5 | 14.5 | 35.9 | 35.4 | 18.2 | 31.9 |
| C2 |  | 0 | 59.3 | 17 | 85.5 | 37.7 | 70.7 |
| C3, c9 |  |  | 0 | 43.4 | 29.5 | 21.7 | 19.4 |
| C4 |  |  |  | 0 | 68.8 | 22.3 | 55.6 |
| C6 |  |  |  |  | 0 | 49.1 | 25.6 |
| C7 |  |  |  |  |  | 0 | 35.3 |
| C8 |  |  |  |  |  |  | 0 |

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
|  | ((C1,c5);(c3, c9)) | c2 | c4 | c6 | c7 | c8 |
| ((C1,c5);(c3, c9)) | 0 | 52.5 | 35.9 | 35.4 | 18.2 | 31.9 |
| C2 |  | 0 | 17 | 85.5 | 37.7 | 70.7 |
| C4 |  |  | 0 | 68.8 | 22.3 | 55.6 |
| C6 |  |  |  | 0 | 49.1 | 25.6 |
| C7 |  |  |  |  | 0 | 35.3 |
| C8 |  |  |  |  |  | 0 |

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
|  | ((C1,c5);(c3, c9)) | c2, c4 | c6 | c7 | c8 |
| ((C1,c5);(c3, c9)) | 0 | 52.5 | 35.4 | 18.2 | 31.9 |
| C2, c4 |  | 0 | 85.5 | 37.7 | 70.7 |
| C6 |  |  | 0 | 49.1 | 25.6 |
| C7 |  |  |  | 0 | 35.3 |
| C8 |  |  |  |  | 0 |

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|  | ((C1,c5);(c3, c9); (c7)) | c2, c4 | c6 | c8 |
| ((C1,c5);(c3, c9); (c7)) | 0 | 52.5 | 35.4 | 31.9 |
| C2, c4 |  | 0 | 85.5 | 70.7 |
| C6 |  |  | 0 | 25.6 |
| C8 |  |  |  | 0 |

|  |  |  |  |
| --- | --- | --- | --- |
|  | ((C1,c5);(c3, c9); (c7)) | c2, c4 | c6, c8 |
| ((C1,c5);(c3, c9); (c7)) | 0 | 52.5 | 35.4 |
| C2, c4 |  | 0 | 85.5 |
| C6, c8 |  |  | 0 |

|  |  |  |
| --- | --- | --- |
|  | ((C1,c5);(c3, c9); (c7);(c6)) | c2, c4 |
| ((C1,c5);(c3, c9); (c7);(c6)) | 0 | 52.5 |
| C2, c4 |  | 0 |

**Dendograma**

