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| > hv\_dis\_50\_100<-hypervolume\_distance(hv\_50,hv\_100, type="centroid", check.memory=FALSE)  > hv\_dis\_50\_100  [1] 1.324779  > hv\_set\_50\_100<-hypervolume\_set(hv1 = hv\_50,hv2=hv\_100,verbose=TRUE,check.memory = FALSE)  Choosing num.points.max=100000 (use a larger value for more accuracy.)  Using minimum density of 3686.619760  Retaining 11311 points in hv1 and 13738 points in hv2.  Beginning ball queries...  Building tree...  done.  Ball query...  done.  Building tree...  done.  Ball query...  done.  Finished ball queries.  > get\_volume(hv\_set\_50\_100)  50 PLS  3.068313  100 PLS  3.726449  Intersection of (50 PLS, 100 PLS)  0.000000  Union of (50 PLS, 100 PLS)  6.794762  Unique component of (50 PLS) relative to (100 PLS)  3.068313  Unique component of (100 PLS) relative to (50 PLS)  3.726449  > hv\_set\_50\_100\_ov<-hypervolume\_overlap\_statistics(hv\_set\_50\_100)  > hv\_set\_50\_100\_ov  jaccard sorensen frac\_unique\_1 frac\_unique\_2  0 0 1 1  >  > hv\_dis\_100\_200<-hypervolume\_distance(hv\_100,hv\_200, type="centroid", check.memory=FALSE)  > hv\_dis\_100\_200  [1] 0.5207455  > hv\_set\_100\_200<-hypervolume\_set(hv1 = hv\_100,hv2=hv\_200,verbose=TRUE,check.memory = FALSE)  Choosing num.points.max=100000 (use a larger value for more accuracy.)  Using minimum density of 3686.619760  Retaining 13738 points in hv1 and 7283 points in hv2.  Beginning ball queries...  Building tree...  done.  Ball query...  done.  Building tree...  done.  Ball query...  done.  Finished ball queries.  > get\_volume(hv\_set\_100\_200)  100 PLS  3.7264489  200 PLS  1.9756072  Intersection of (100 PLS, 200 PLS)  1.0866789  Union of (100 PLS, 200 PLS)  4.6153771  Unique component of (100 PLS) relative to (200 PLS)  2.6397700  Unique component of (200 PLS) relative to (100 PLS)  0.8889283  > hv\_set\_100\_200\_ov<-hypervolume\_overlap\_statistics(hv\_set\_100\_200)  > hv\_set\_100\_200\_ov  jaccard sorensen frac\_unique\_1 frac\_unique\_2  0.2354475 0.3811534 0.7083876 0.4499519  >  > hv\_dis\_200\_500<-hypervolume\_distance(hv\_200,hv\_500, type="centroid", check.memory=FALSE)  > hv\_dis\_200\_500  [1] 0.6901326  > hv\_set\_200\_500<-hypervolume\_set(hv1 = hv\_200,hv2=hv\_500,verbose=TRUE,check.memory = FALSE)  Choosing num.points.max=100000 (use a larger value for more accuracy.)  Using minimum density of 4559.553465  Retaining 9007 points in hv1 and 15403 points in hv2.  Beginning ball queries...  Building tree...  done.  Ball query...  done.  Building tree...  done.  Ball query...  done.  Finished ball queries.  > get\_volume(hv\_set\_200\_500)  200 PLS  1.9756072  500 PLS  3.3781817  Intersection of (200 PLS, 500 PLS)  1.6222483  Union of (200 PLS, 500 PLS)  3.7315405  Unique component of (200 PLS) relative to (500 PLS)  0.3533588  Unique component of (500 PLS) relative to (200 PLS)  1.7559334  > hv\_set\_200\_500\_ov<-hypervolume\_overlap\_statistics(hv\_set\_200\_500)  > hv\_set\_200\_500\_ov  jaccard sorensen frac\_unique\_1 frac\_unique\_2  0.4347396 0.6060188 0.1788609 0.5197865  >  > hv\_dis\_500\_1000<-hypervolume\_distance(hv\_500,hv\_1000, type="centroid", check.memory=FALSE)  > hv\_dis\_500\_1000  [1] 0.7461788  > hv\_set\_500\_1000<-hypervolume\_set(hv1 = hv\_500,hv2=hv\_1000,verbose=TRUE,check.memory = FALSE)  Choosing num.points.max=100000 (use a larger value for more accuracy.)  Using minimum density of 4559.553465  Retaining 15403 points in hv1 and 9276 points in hv2.  Beginning ball queries...  Building tree...  done.  Ball query...  done.  Building tree...  done.  Ball query...  done.  Finished ball queries.  > get\_volume(hv\_set\_500\_1000)  500 PLS  3.3781817  1000 PLS  2.0345632  Intersection of (500 PLS, 1000 PLS)  1.5908460  Union of (500 PLS, 1000 PLS)  3.8218990  Unique component of (500 PLS) relative to (1000 PLS)  1.7873357  Unique component of (1000 PLS) relative to (500 PLS)  0.4437173  > hv\_set\_500\_1000\_ov<-hypervolume\_overlap\_statistics(hv\_set\_500\_1000)  > hv\_set\_500\_1000\_ov  jaccard sorensen frac\_unique\_1 frac\_unique\_2  0.4162449 0.5878149 0.5290822 0.2180897  >  > hv\_dis\_1000\_3000<-hypervolume\_distance(hv\_1000,hv\_3000, type="centroid", check.memory=FALSE)  > hv\_dis\_1000\_3000  [1] 0.4716854  > hv\_set\_1000\_3000<-hypervolume\_set(hv1 = hv\_1000,hv2=hv\_3000,verbose=TRUE,check.memory = FALSE)  Choosing num.points.max=100000 (use a larger value for more accuracy.)  Using minimum density of 4242.975675  Retaining 8632 points in hv1 and 11919 points in hv2.  Beginning ball queries...  Building tree...  done.  Ball query...  done.  Building tree...  done.  Ball query...  done.  Finished ball queries.  > get\_volume(hv\_set\_1000\_3000)  1000 PLS  2.0345632  3000 PLS  2.8091134  Intersection of (1000 PLS, 3000 PLS)  0.9651919  Union of (1000 PLS, 3000 PLS)  3.8784848  Unique component of (1000 PLS) relative to (3000 PLS)  1.0693713  Unique component of (3000 PLS) relative to (1000 PLS)  1.8439215  > hv\_set\_1000\_3000\_ov<-hypervolume\_overlap\_statistics(hv\_set\_1000\_3000)  > hv\_set\_1000\_3000\_ov  jaccard sorensen frac\_unique\_1 frac\_unique\_2  0.2488580 0.3985369 0.5256024 0.6564069 |
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