Two-Step Kernel Method Exploration: 20 Cell Types with 4 Rare Cell Types - Effect Sizes were Added Only to Non-rare Cell Types

Kelvin Njuki

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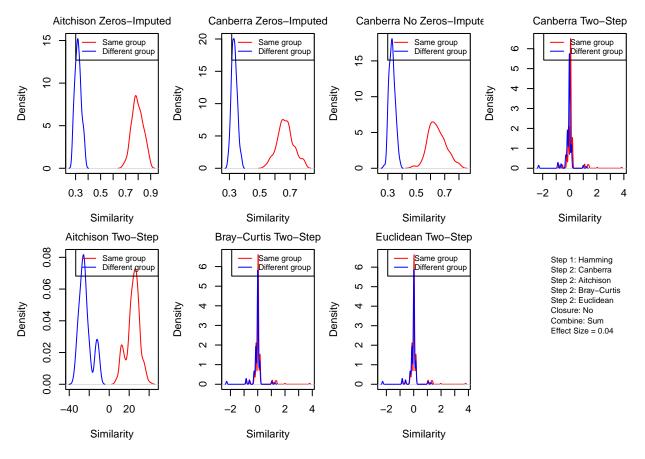


Figure 1: In the first row, zeros are replaced by 1. In the second row, we are implementing two step kernel where in step one, Hamming Distance was used; in step two Aitchison, BCD, Canberra & Euclidean were used; Closure was not applied in step two; Kernels (K1 & K2) were combined through Sum.

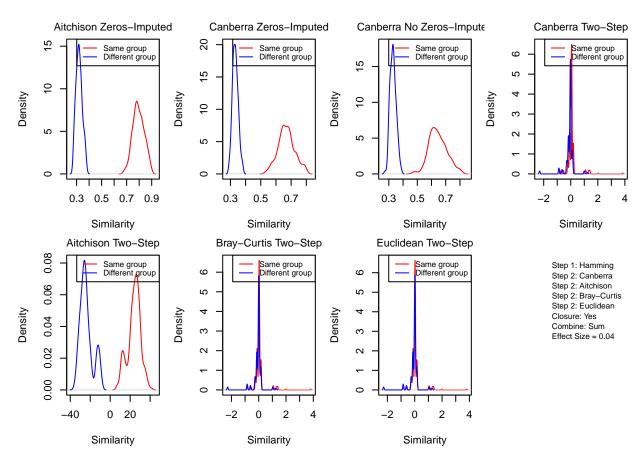


Figure 2: In the first row, zeros are replaced by 1. In the second row, we are implementing two step kernel where in step one, Hamming Distance was used; in step two Aitchison, BCD, Canberra & Euclidean were used; Closure was applied in step two; Kernels (K1 & K2) were combined through Sum.

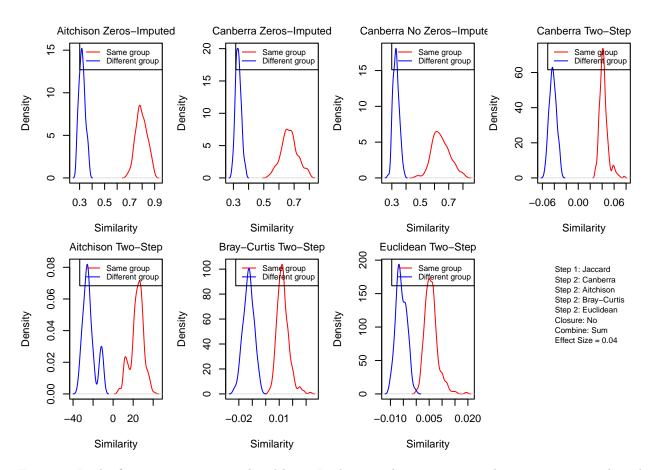


Figure 3: In the first row, zeros are replaced by 1. In the second row, we are implementing two step kernel where in step one, Jaccard Distance was used; in step two Aitchison, BCD, Canberra & Euclidean were used; Closure was not applied in step two; Kernels (K1 & K2) were combined through Sum.

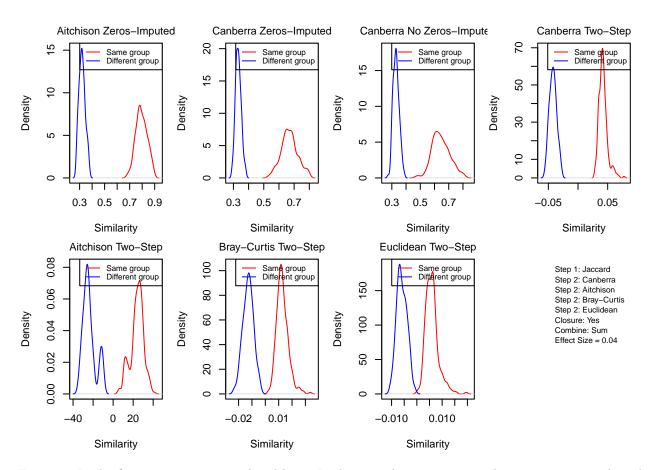


Figure 4: In the first row, zeros are replaced by 1. In the second row, we are implementing two step kernel where in step one, Jaccard Distance was used; in step two Aitchison, BCD, Canberra & Euclidean were used; Closure was applied in step two; Kernels (K1 & K2) were combined through Sum.

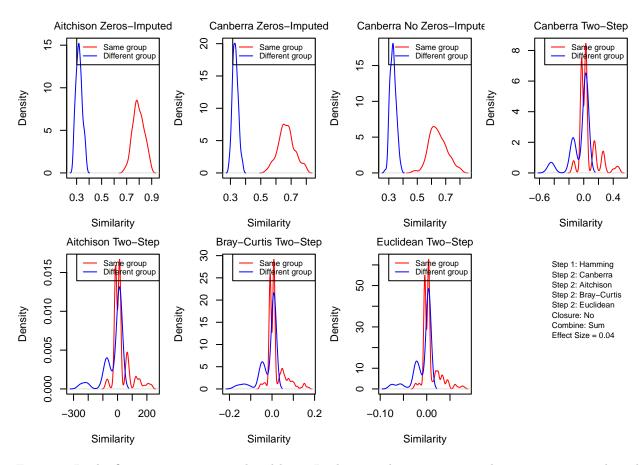


Figure 5: In the first row, zeros are replaced by 1. In the second row, we are implementing two step kernel where in step one, Hamming Distance was used; in step two Aitchison, BCD, Canberra & Euclidean were used; Closure was not applied in step two; Kernels (K1 & K2) were combined through Product.

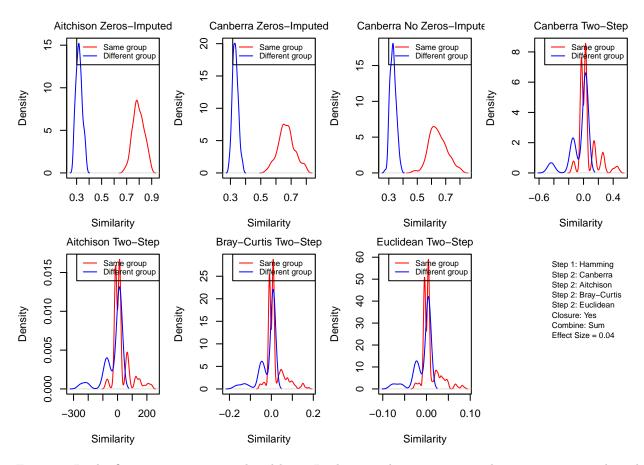


Figure 6: In the first row, zeros are replaced by 1. In the second row, we are implementing two step kernel where in step one, Hamming Distance was used; in step two Aitchison, BCD, Canberra & Euclidean were used; Closure was applied in step two; Kernels (K1 & K2) were combined through Product

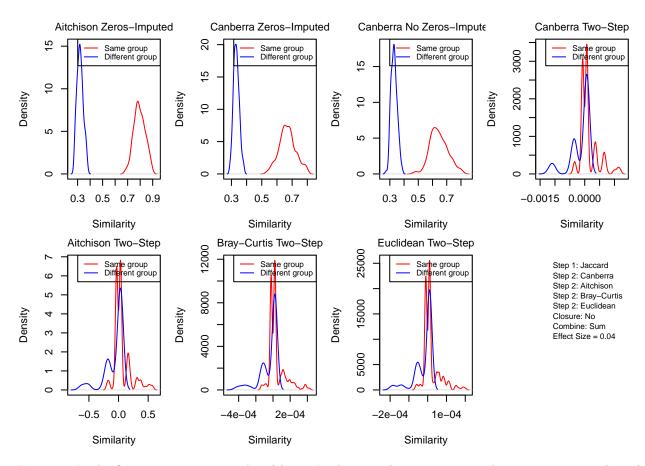


Figure 7: In the first row, zeros are replaced by 1. In the second row, we are implementing two step kernel where in step one, Jaccard Distance was used; in step two Aitchison, BCD, Canberra & Euclidean were used; Closure was not applied in step two; Kernels (K1 & K2) were combined through Product

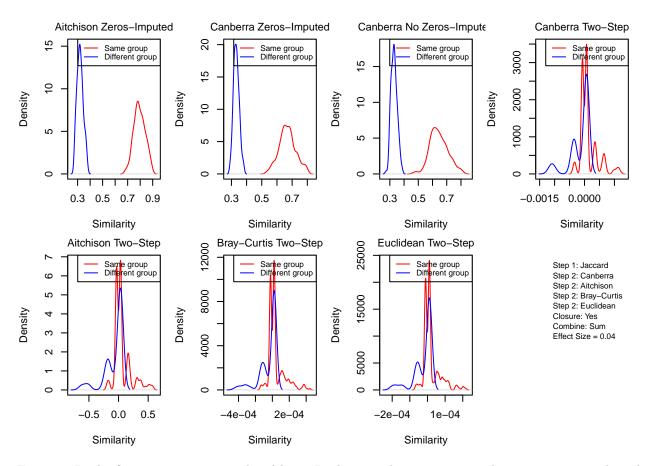


Figure 8: In the first row, zeros are replaced by 1. In the second row, we are implementing two step kernel where in step one, Jaccard Distance was used; in step two Aitchison, BCD, Canberra & Euclidean were used; Closure was applied in step two; Kernels (K1 & K2) were combined through Product