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CSC 375 – Voting Theory

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Project 3 Report

An Analysis of Multi-Winner Voting Systems

K-Borda

Chart, scatter chart

Description automatically generated

K-Approval

Chart, scatter chart

Description automatically generated

Greedy Chamberlin-Courant

Chart, scatter chart

Description automatically generated

K-Borda, K-Approval, and the Greedy Chamberlin-Courant algorithm range from excellence-focused to diversity-focused rules. We expect excellence-based rules to have a condensed set of committee members at the center of the ideological spectrum because they appeal to the most number of voters. Alternatively, diversity-based rules are expected to have a spread out set of committee members to represent different ideological factions in the population. In the graphs above, K-Borda tended to produce the most condensed set of committee members, Chamberlin-Courant tended to be the most spread out, and K-Approval tended to fall in between the two. These graphs fell in line with our prior expectations for what we considered the three focuses to be: K-Borda being condensed was excellence-focused, Chamberlin-Courant being spread out was diversity-focused, and K-Approval struck a good balance between excellence and diversity.