An Effective Method for Identifying Clusters of Robot Strengths

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The R codes required to recreate the analysis and tables found in the main article. Below, each file is listed individually with descriptions.

List of Data Files

- 2018_FRC_Data_division.RData: For division = 1, $\cdots$, 12, represents the data of Carver, Galileo, Hopper, Newton, Roebling, Turing, Archimedes, Carson, Curie, Daly, Darwin, Tesla division for the 2018 FRC championships.
- 2019_FRC_Data_division.RData: For division = 1, $\cdots$, 12, represents the data of Carver, Galileo, Hopper, Newton, Roebling, Turing, Archimedes, Carson, Curie, Daly, Darwin, Tesla division for the 2019 FRC championships.

List of R Files

- Identifying_Clusters_AUX.R: This file provides the R codes for estimation and prediction functions.
- Identifying_Clusters_MAIN.R: This file provides the R codes for the TCL and LCT method.
- FRC_data_analysis.R: This file provides the R codes for data analysis for the 2018 and 2019 FRC Houston and Detroit championships.

Reference

Teng, J.-C., Chiang, C.-T., and Lim, A., 2022. An Effective Method for Identifying Clusters of Robot Strengths.