StarCraft2ReplayAnalysis Master Table Dataset

Abstract: This data was used in Thompson et al. (2013). A list of possible game actions is discussed in Thompson, Blair, Chen, & Henrey (2013).

Data Set Characteristics:	Multivariate	Number of Instances:	3395	Area:	Game
Attribute Characteristics:	Integer, Real	Number of Attributes:	20	Date Donated	2013-10-22
Associated Tasks:	Regression	Missing Values?	Yes	Number of Web Hits:	9320

Source:

– Creators: Mark Blair, Joe Thompson, Andrew Henrey, Bill Chen
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– Date: September, 20, 2013

Data Set Information:

– We aggregated screen movements into screen-fixations using a Salvucci & Goldberg (2000) dispersion-threshold algorithm, and defined Perception Action Cycles (PACs) as fixations with at least one action.
– Time is recorded in terms of timestamps in the StarCraft 2 replay file. When the game is played on 'faster', 1 real-time second is equivalent to roughly 88.5 timestamps.
– List of possible game actions is discussed in Thompson, Blair, Chen, & Henrey (2013)

Attribute Information:

1. GameID: Unique ID number for each game (integer)
2. LeagueIndex: Bronze, Silver, Gold, Platinum, Diamond, Master, GrandMaster, and Professional leagues coded 1-8 (Ordinal)
3. Age: Age of each player (integer)

4. HoursPerWeek: Reported hours spent playing per week (integer)
5. TotalHours: Reported total hours spent playing (integer)
6. APM: Action per minute (continuous)
7. SelectByHotkeys: Number of unit or building selections made using hotkeys per timestamp (continuous)
8. AssignToHotkeys: Number of units or buildings assigned to hotkeys per timestamp (continuous)
9. UniqueHotkeys: Number of unique hotkeys used per timestamp (continuous)
10. MinimapAttacks: Number of attack actions on minimap per timestamp (continuous)
11. MinimapRightClicks: number of right-clicks on minimap per timestamp (continuous)
12. NumberOfPACs: Number of PACs per timestamp (continuous)
13. GapBetweenPACs: Mean duration in milliseconds between PACs (continuous)
14. ActionLatency: Mean latency from the onset of PACs to their first action in milliseconds (continuous)
15. ActionsInPAC: Mean number of actions within each PAC (continuous)
16. TotalMapExplored: The number of 24x24 game coordinate grids viewed by the player per timestamp (continuous)
17. WorkersMade: Number of SCVs, drones, and probes trained per timestamp (continuous)
18. UniqueUnitsMade: Unique unites made per timestamp (continuous)
19. ComplexUnitsMade: Number of ghosts, infestors, and high templars trained per timestamp (continuous)
20. ComplexAbilitiesUsed: Abilities requiring specific targeting instructions used per timestamp (continuous)
21. MaxTimeStamp: Time stamp of game's last recorded event (integer)

Relevant Papers:

1. Thompson JJ, Blair MR, Chen L, Henrey AJ (2013) Video Game Telemetry as a Critical Tool in the Study of Complex Skill Learning. PLoS ONE 8(9): e75129. [Web Link]
– Results:
– Skip league conditional inference forest classification (Bronze-Gold;Silver-Platinum;Gold-Diamond;Platinum-Masters;Diamond-Professional) showed changing patterns of variable importance with skill.
– Predicted attribute: League (Ordinal)