MP-Game-5: Multiplayer Boolean Concept Learning (Summurization Format)

Intro

- Goal: Collect cheaper data for cultural ratchet experiment.
- In spring, we ran a pilot experiment, with a "round-by-round" format, where players only learned a single concept.
- In fall, we ran a pilot experiment with a "summurization" format, where palyers played multiple concepts.
- For spring pilot (round-by-round), we had 5 concepts, each with two different lists of stimuli.
- For fall pilot (summurization), we had the same 5 concepts and selected one of two lists of stimuli, from spring.

Cost Comparison

Spring Pilot Cost Per Round (Round-By-Round-Format):

$122.40 / 36 = $3.40 / round
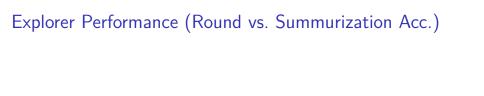
Fall Pilot Cost Per Round (Summurization-Format):

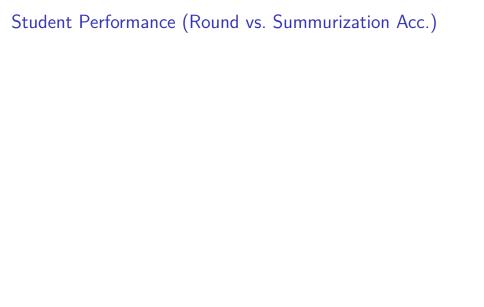($(1.25 * 20 + .50 * 20) + $11.60)) / 50 = $0.892 / round

Experiment Details (Critters)

- 81 total possible critters: ~50 training, ~31 test
- 4 axes of variability:
  - Critter Type (Bug, Fish, Bird)
  - Primary Color (Blue, Green, Orange)
  - Secondary Color (Red, Yellow, Purple)
  - Size (Small, Medium, Large)

Experiment Details (Concepts)

- Primary Color == Orange ("Orange things")
- Critter Type == Fish && Primary Color == Blue ("Blue fish")
- Primary Color == Orange && Secondary Color == Purple ("Purple and orange things")
- Critter Type == Bug || Secondary Color == Yellow ("Bugs, or yellow things")
- Critter Type == Bird || Primary Color == Green ("Birds, or green things")

Explorer Performance (Round vs. Summurization Acc.)

Student Performance (Round vs. Summurization Acc.)

Explorer Performance ()

Next Steps

- Language Analysis