

Category Learning:
Comparison of computational and human
methods

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Introduction

Start with explaining category learning, including its importance in artificial intelligence systems and its relation to human cognitive development. Using the context of the original work by Anderson, and the further work by Sanborn, Griffiths, and Navarro, introduce the concept of the experiment.

Experimental Design

Describe how experiment chosen: balancing between a task natural for a person and a task natural for a categorization algorithm in order to facilitate the comparison.

Mechanical Turk users were subject of experiment; all movements of the images were logged and stored for analysis.

Particle Filter

Results

Discussion

Conclusions

References

- [1] J.R. Anderson. The adaptive nature of human categorization. *Psychological Review*, 98(3):409, 1991.
- [2] A.N. Sanborn, T.L. Griffiths, and D.J. Navarro. Rational approximations to rational models: alternative algorithms for category learning. *Psychological Review*, 117(4):1144, 2010.

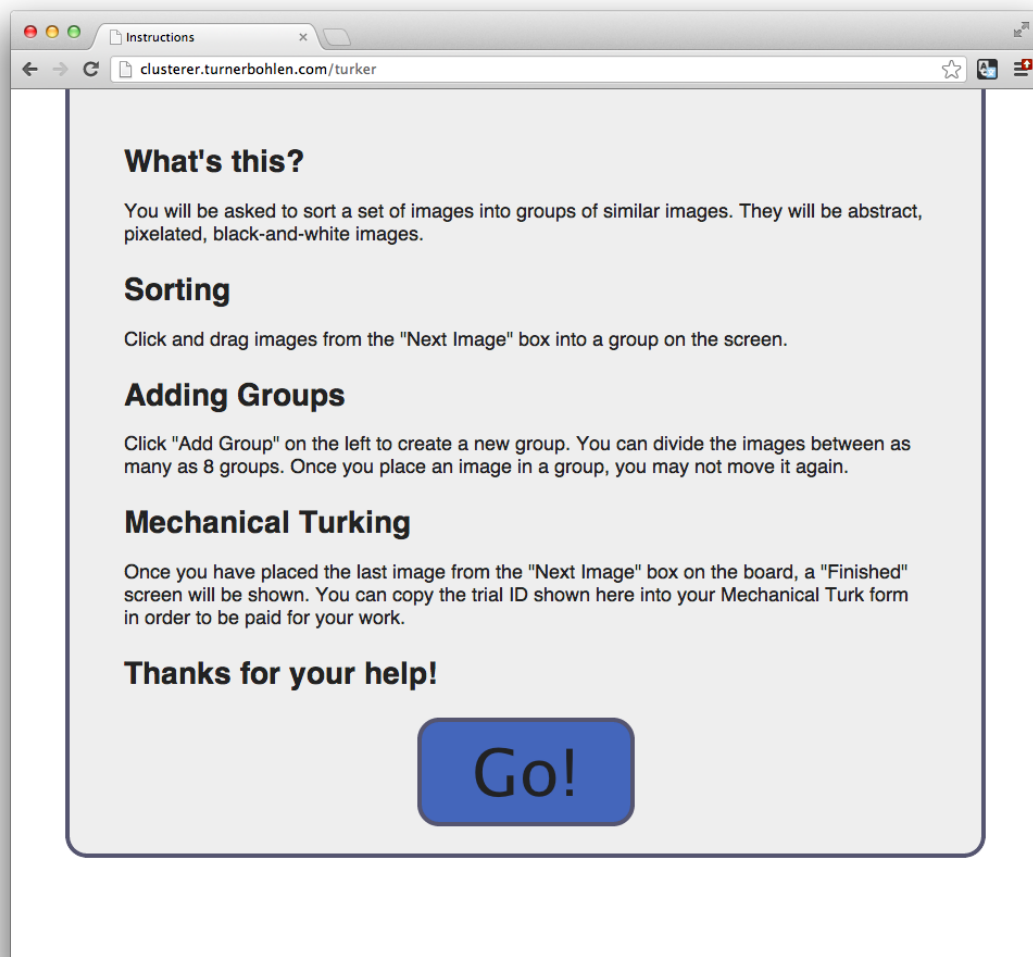


Figure 1: The instructions presented to the Mechanical Turk worker before starting trial.

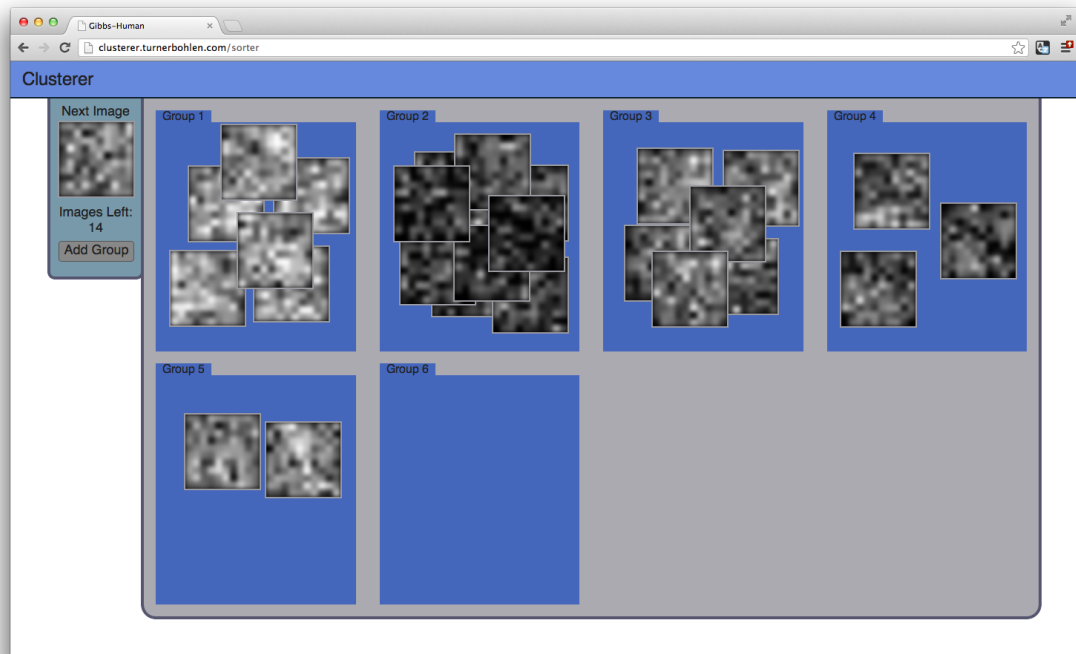


Figure 2: Interface through which a trial was completed. Images are dragged from the 'Next Image' box into one of the groups. Once an image was placed in a group, it could not be switched into another group. The subject was limited to creating 8 groups.