Innsbruck CNN Abstract Rule Eyetracking (ICARE) Dataset

Convolutional neural networks are widely used in image classification. But perform badly when it is an abstract rule like identity or symmetry. In this dataset we conducted a study with humans on three different datasets based on abstract rules. In addition to the study we used an eye tracker to gather data of participants' eye movements.

Dataset Features

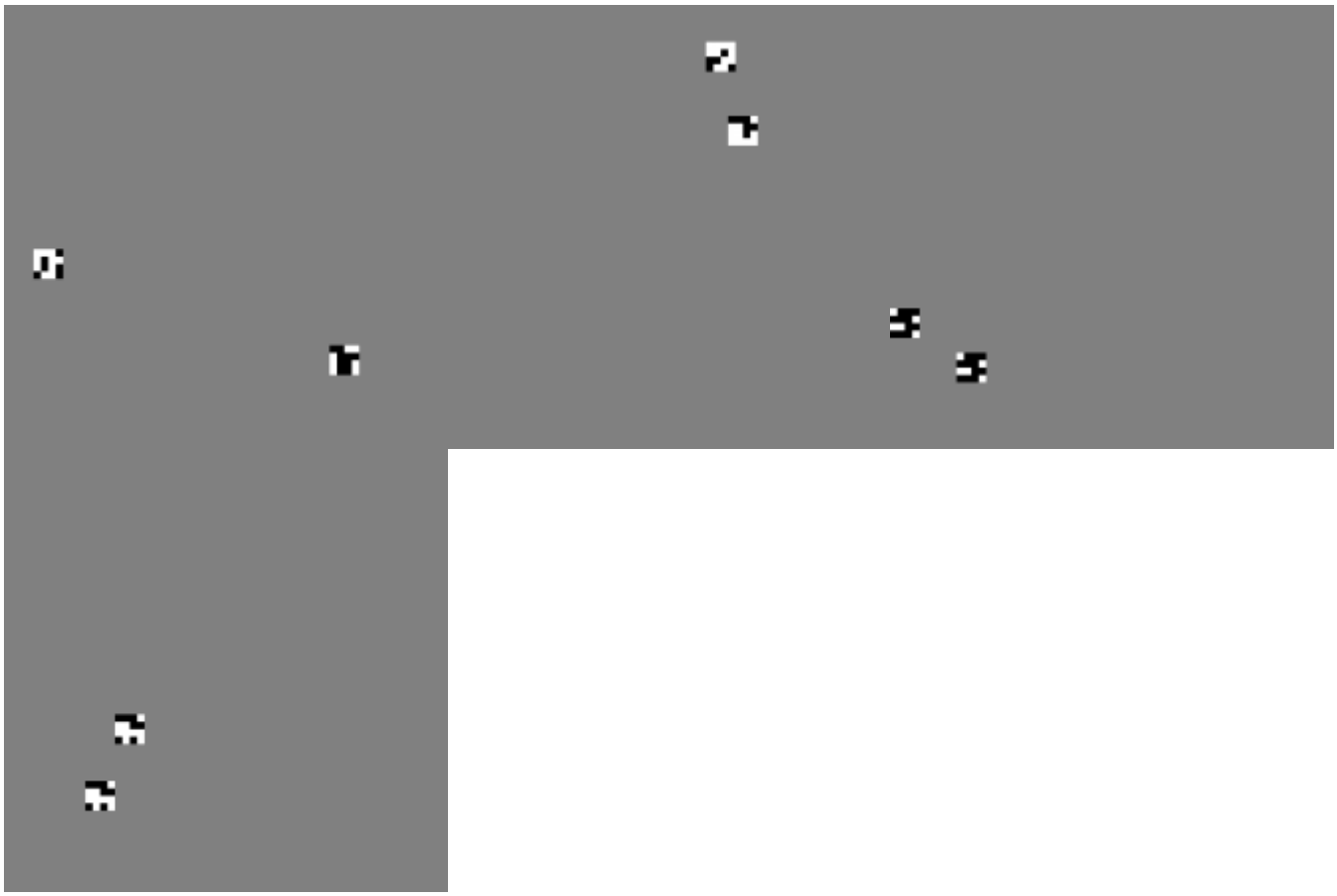
- 13 participants classified 12 selected tasks in the same order
- 12 tasks consisting of generated and randomly selected images:
  - 2 PSVRT tasks: SR and SD
  - 4 SVRT tasks: Problems 1, 19, 20 and 21
  - 6 Checkerboard tasks: 2 fixed camera position, 2 random board placements and 2 camera rotated on a sphere
- Eye movements were tracked with a Tobii X2-60 eye tracking device, satisfying the recommended distances
  - Gaze data was saved as Gazedata objects from Tobii
- Publicly available to Download (~300MB).

Sample Images of Tasks

SVRT

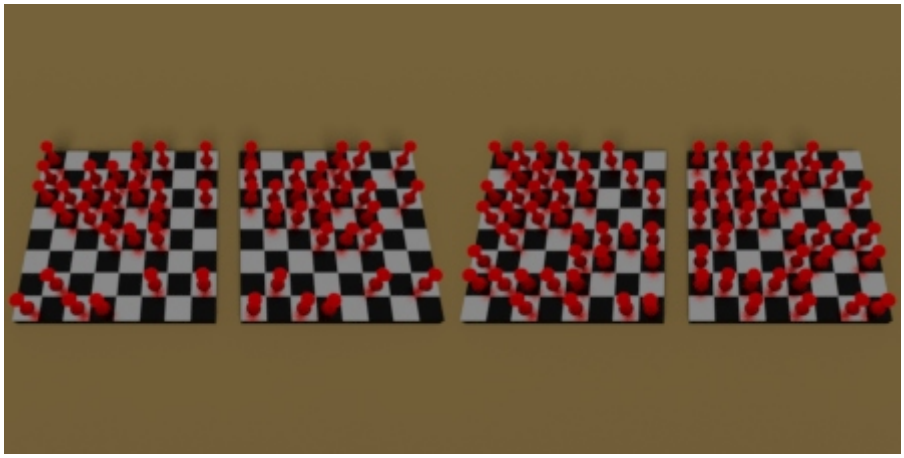
Svrt 1, 19, 20 and 21

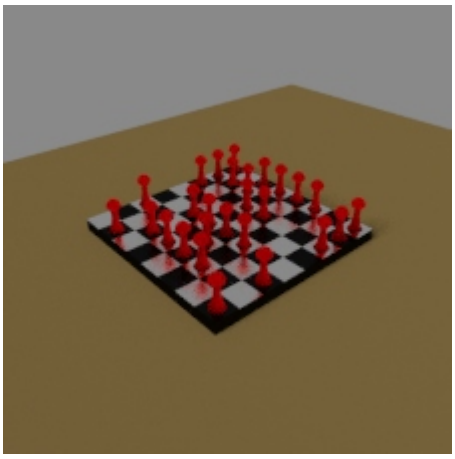
PSVRT



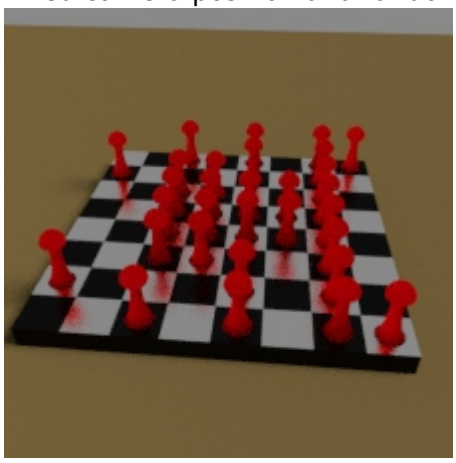
PSVRT with same/different bitpatterns, each once horizontally and once vertically aligned

Checkerboard





Fixed camera position and random placements of checkerboards



Camera rotated on a sphere

Reference

To be published

Acknowledgement

This research was possible due to the Management Center Innsbruck providing the eye tracking device.

Contact

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