

KANDY Generation Pipeline

i -th Task Specifics

CONFIGURATION

- Supervision Options
- Target # Samples
- % Train, % Val, % Test
- **Perceptual Variability:**
Color/Size/Both/None

Textual Description

Generation Rules
(**positive/negative**)

Ground Truth Rule
(**positive**)

YAML

- **Properties** (**shape**, **color**, **size**)
- **Operators**
 - Compositional (**in**, **stack**, **grid**, **random**, ...)
 - Auxiliary
 - Deterministic (**sort**, **mirror**, ...)
 - Random (**pick**, **random_repeat**, ...)
 - Memory-based (**store**, **recall**, ...)
 - Set-based (**union**, **intersect**, ...)

Prolog

- Depends on given Background Knowledge (extra file)

Sample Generation

1. Generation at Symbolic Level
2. Ground Truth Rule-based Rejection
3. Image Rendering with **Perceptual Variability**
4. Supervision Generation

Data