

# Integrating KR and ML for Trustworthy AI

Symbolic/Discrete Space

❖ Knowledge Representation and Reasoning (KR)

- Interpretability
- Explainability

Bridging Two Spaces

- ❖ Linear-algebraic logic programming
- ❖ Differentiable logic reasoning and learning
- ❖ Incorporating constraints into ML systems

## Applications

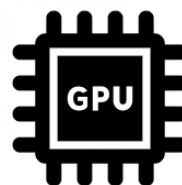
- ❖ Object detection
- ❖ VQA, NLI, Robotics
- ❖ Biology, Physics, etc.

LLM

Neurosymbolic AI

Numeric/Continuous Space  
❖ Machine Learning (ML)

- Robustness
- Scalability



*High-speed algebraic computation on GPUs*



River of Aggregation

ML  
SR