

NEURAL-SYMBOLIC SYSTEMS

an academic AI research community



Deep Learning

$$\begin{aligned}(p \wedge (p \rightarrow q)) &\rightarrow q \\ (\neg q \wedge (p \rightarrow q)) &\rightarrow \neg p \\ (p \rightarrow q) &\rightarrow (\neg p \vee q) \\ ((p \vee q) \wedge \neg p) &\rightarrow q\end{aligned}$$

Logic

*Lorem ipsum
dolor sit amet,
consectetur
adipiscing elit,
sed do ...*

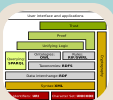
NLP



Knowledge Graphs

$$\begin{aligned}(BK, E^+, E^-) &\xrightarrow{\text{induce}} H \\ \text{where} \\ (BK, H) &\models E^+\end{aligned}$$

ILP



Semantic Web