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## Optimisation in Neurosymbolic Learning Systems

Emile van Krieken

**step: 2982340 loss: 1.6**

It conceptualised the white raven on the top left of the oak. They were none too satisfied. A white raven? Ravens are black! And thus, they spoke: "Thou are not a raven."

**step: 4094681 loss: 1.1**

It conceptualised the green apple on the top left of the oak. They were none too satisfied. An apple on an oak? Oaks do not have apples as their fruit! And thus, they spoke: "Thou are not an apple."

**step: 6694542 loss: 0.8**

It conceptualised the flight of black ravens on the oak. Finally, They were satisfied. Yet there was something off about the raven on the top left of the oak. "No", they reinforced themselves, "all is in order."

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