Causality - Perspective

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✉ — Correspondence possible via GitHub Issues

Abstract

Introduction

Bias

Meaning and examples of biases

Why do we need biases?

Bias from prior knowledge

Prior knowledge

OmniPath/BioCypher

Ontologies

Modelling on prior knowledge

Statistical, causal, and mechanistic models

Why modelling needs biases and how to introduce them

Causality in foundation models

Current interest in transformers

Recent foundation model benchmarks

Is attention (and large amounts of data) “all you need” to induce reliable biases in your model? (GPT “understands” language well) [1]

What is the mathematical relationship between explicit (e.g. ODE) and implicit (transformers) models?

Latent encodings of explicit prior knowledge (GEARS)

References

1. **ChatGPT broke the Turing test — the race is on for new ways to assess AI**
   Celeste Biever
   Nature (2023-07-25) https://doi.org/gskd92
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