CS – 549

Paper Review – On the Paradox of Learning to Reason from Data

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- **What is the problem discussed in the paper?**
  The main problem discussed in the paper is "Can a BERT model be trained end-to-end to solve logical reasoning problems presented in natural language.

- **Why is it important?**
  Logical reasoning is needed in a wide range of NLP tasks, including NLI, QA, and common-sense-reasoning. The ability to draw conclusions is crucial in the above tasks.

- **What are the main ideas of the proposed solution for the problem?**
  The authors have tried to answer this question in a confined problem space where there exists a set of parameters that perfectly simulates logical reasoning. They have observed the evidence that seems to imply that neural model's can learn to reason.

- **What are the shortcomings of the proposed solution?**
  A model always tends to learn statistical features, it is difficult to construct logical reasoning dataset that exhibits no statistical features. Caution should be taken when we seek to train neural models end-to-end to solve logical reasoning tasks in NLP that involve prior knowledge.