

Despite extensive research in the field of Generative Artificial Intelligence(AI), little is known about the reasoning abilities of AI models with respect to solving Constraint Satisfaction Problems(CSP) such as zebra puzzles. This dissertation aims to investigate the competency of ChatGPT in reasoning out zebra puzzles and how prompt engineering techniques such as Chain Of Thought and One Shot prompting can be used to improve its performance. We measure the accuracy of GPT-4 on sixteen variations of the classic zebra puzzle using two different approaches: interactive communication in natural language and generation of constraint models in a programming language. Preliminary results indicate that GPT-4 exhibits promising proficiency in the creation of constraint models using programming languages such as Prolog.