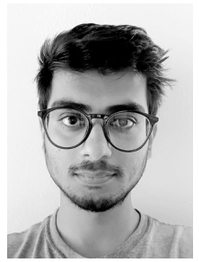

RISHI HAZRA completed his Master's in AI at the Indian Institute of Science (IISc). Before his PhD, he had brief stints at Amazon Alexa and as a Research Associate at IISc. During his PhD, Rishi interned twice at Meta, working in the Reality Labs and the FAIR (Meta AI) divisions. He continues his research journey as a Postdoctoral Researcher at FAIR, Meta, working on advancing research towards Artificial General Intelligence (AGI).

Reasoning and decision-making are core challenges in AI, traditionally addressed through planning, which relies on known models and symbolic representations, and reinforcement learning (RL), which learns behaviors through interaction under uncertainty. While Large Language Models (LLMs) have shown promise in these areas, this dissertation reveals that LLMs often fail to demonstrate true reasoning, instead relying on statistical correlations. To overcome these limitations, it introduces neurosymbolic architectures that integrate the generative strengths of LLMs with the rigor of symbolic methods. Empirical results across planning, reward design, and plan verification tasks show that these hybrid systems are more robust and accurate.

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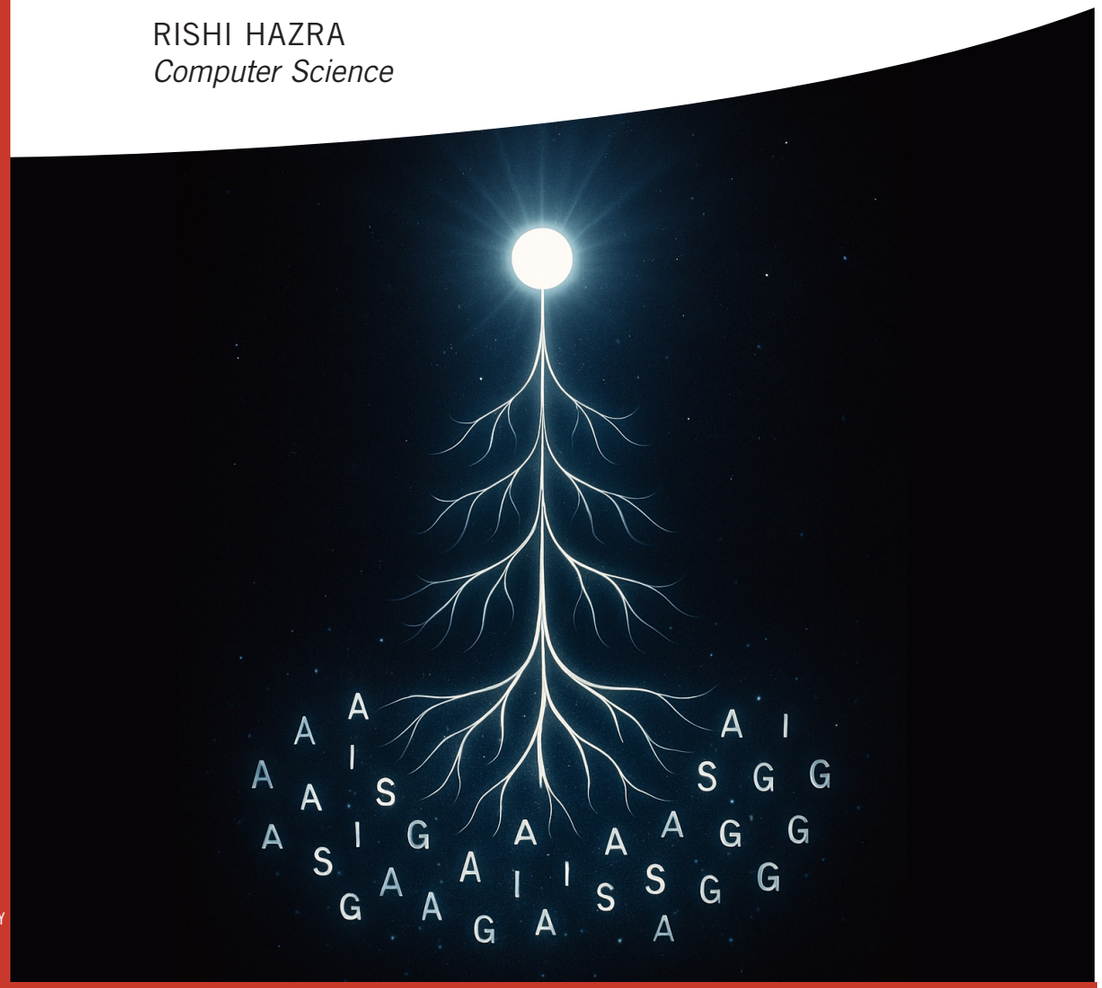
RISHI HAZRA
Computer Science



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