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Deep Reinforcement Learning and the Type IIA Landscape

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An artificial intelligence agent known as an asynchronous advantage actor-critic is utilized to explore type IIA compactifications with intersecting D6-branes. By reinforcement learning, the agent's performance in satisfying string consistency conditions, and finding Standard Model like configurations, is significantly improved. In one case, we demonstrate that the agent learns a human-derived strategy for finding consistent string models. In another case, where no human-derived strategy exists, the agent learns a genuinely new strategy that achieves the same goal twice as efficiently per unit time.

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