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String Theory and Deep Learning

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Recent years have seen great advances in deep learning, including many applications utilizing experimental data. However, deep learning is also applicable to theoretical data that arises in theoretical physics and pure mathematics. In this talk I will review applications of deep learning to string theory and associated mathematics. Time permitting, topics will include the application of reinforcement learning to search problems in the string landscape, generative models to making statistical predictions for the physics of axion-like particles, and natural language processing to knot theory.