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Simulating Visual Learning and Optical Illusions via a Network-Based Genetic Algorithm THEODORE SIU, Rutgers University Department of Physics, MIGUEL VIVAR, Rutgers University Department of Biomedical Engineering, TROY SHINBROT, Rutgers University Department of Physics — We present a neural network model that uses a genetic algorithm to identify spatial patterns. We show that the model both learns and reproduces common visual patterns and optical illusions. Surprisingly, we find that the illusions generated are a direct consequence of the network architecture used. We discuss the implications of our results and the insights that we gain on how humans fall for optical illusions

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