Evolving Camouflage Versus a Salience-Seeking Predator
Evolving Camouflage Against a Salience-Seeking Predator

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Abstract
Describes an abstract 2d simulation model of camouflage in nature. It builds on an earlier model where camouflage evolved versus a “human predator” in an interactive game-like setting. This version replaces the human with a simulated predator based on a convolutional neural network. This predator is trained to locate *prey* that contrast visually (appear *salient*) against their background. This model uses photographs of the real world as the background environment. The prey are circular and have a fixed size. Each prey has a unique color texture. Over time, the simulation’s population of prey becomes more cryptic: harder to find. This results from the predator removing the most conspicuous prey, and new offspring being created from less conspicuous “parents.” […]