Consider a stochastic process (such as a stochastic differential equation) that admits an invariant probability measure. We are interested in many things like the landscape, the sensitivity, and the speed of convergence of the invariant probability measure. However, it is usually difficult to obtain sharp estimates rigorously. In this talk I will introduce a few novel data-driven computational methods, including but not limited to deep learning approaches, to solve these problems for a class of stochastic processes. Generally those data-driven methods are less affected by the curse-of-dimensionality than traditional grid-based methods. I will demonstrate a few high (up to 100) dimensional examples in my talk.