THESIS PROPOSAL: GAME-THEORETIC MODELS FOR GENERATIVE LEARNING

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Submitted in Partial Fulfillment of

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by

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ABSTRACT

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This document describes my thesis proposal for a planned graduation in Fall 2019. In my thesis, I will discuss game theoretic models in generative learning. It will cover both theory analysis and real applications in image synthesis and voice conversion. Specifically, I will introduce the concept of distributional robust games and define the robust Nash equilibrium, with additional discussions on how to measure the similarity between data sets in different domains, and develop generative models for image and audio data. Neural network architectures will be designed to learn the latent representations of high dimensional data. This document also contains an outline of my thesis and my research plan till its completion.