Movie Recommendations Using Low-dimensional Codes

Christopher Curro, David Katz, Harrizon Zhao
The Cooper Union
Electrical Engineering

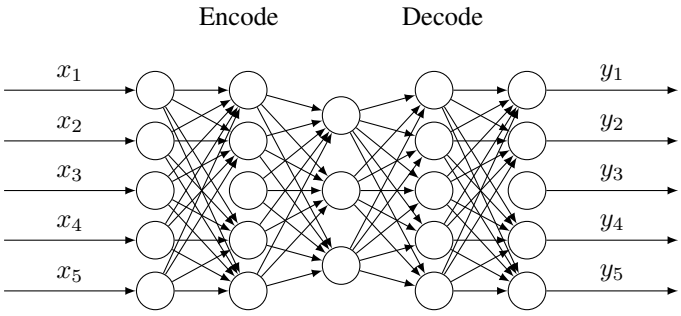

Fig. 1: A simple autoencoder with a two layer encoder/decoder pair. This autoencoder would code a five dimensional space into a three dimensional space. Each neuron represents a weighted sum passed through an activation function.

***Abstract*—We present a movie recomendation system that finds a weighted set of nearest neigbors to an arbitray desired movie based on user specified interests in a latent space learned by an autoencoder. We learn a low-dimensional representation to make recomendentions in from a much larger feature space consisting of approximately one thousand tags and their relevancies to about ten thousand movies.**

I. Introduction

A. Autoencoders

B. Nearest Neighbors Recomendations

II. System Description

A. Autoencoder

B. Recomendations

III. Results

IV. Conclusion