SYDE Coding Project 3

Description

The aim of this project is to help you understand the importance of knowing the data space and use projection to learn model in the related space.

This project will study the effect of learning models in two spaces and compare their performance for interpolation and extrapolation.

Format: a PDF or a Jupyter notebook containing all the plots

Due: Feb 7th 11:59pm

Use the provided notebook as a reference to generate plots for this project. Modify the code to generate plots in the following steps.

Steps

1. Modify the code so that you have one model trained in the Cartesian coordinates, and one model trained in the polar coordinates. Plot the results in the Cartesian coordinates.

2. Test both models on their capability of extrapolation, and plot the results.

3. Compare models with and without the normalization, and plot the results. Note that without the normalization step, the generated data can fall out of the training data distribution.