CS5486 Intelligent Systems

Assignment 2

1. Using MATLAB tools at the following links to simulate a two-input support vector machine and a least-square support vector machine to model an unknown sine function $z = \sin(x + y)$ based on 100 training samples randomly generated in $[-5 , 5]^2$ under the uniform distribution and Gaussian kernel with unity sigma.
2. Show your results with the samples and two separately plotted 3D graphs of the outputs with the samples and regular grid points as inputs.
3. Compare the results in terms of modeling accuracy and computational speed.

LSSVM toolbox: https://www.esat.kuleuven.be/sista/lssvmlab/

Due by Mar 27, 2025.