Icon

Description automatically generated

**Optimization Techniques for Data Mining**

Fall 2024

Second Laboratory Assignment Report

Support Vector Machine

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# SVM problem in primal formulation

| **Dataset size** | **Regularization parameter ()** | **Objective function value** | **Test accuracy** |
| --- | --- | --- | --- |
| 100 | 0.1 |  |  |
| 1 |  |  |
| 10 |  |  |
| 100 |  |  |
| 1,000 | 0.1 |  |  |
| 1 |  |  |
| 10 |  |  |
| 100 |  |  |
| 10,000 | 0.1 |  |  |
| 1 |  |  |
| 10 |  |  |
| 100 |  |  |
| 100,000 | 0.1 |  |  |
| 1 |  |  |
| 10 |  |  |
| 100 |  |  |

**Table X.** [...] for the datasets generated by the gensvmdat.exe file.

| **Dataset size** | **Regularization parameter ()** | **Objective function value** | **Test accuracy** |
| --- | --- | --- | --- |
|  | 0.1 |  |  |
| 1 |  |  |
| 10 |  |  |
| 100 |  |  |

**Table X.** [...] for the real dataset.

# SVM problem in dual formulation