UNIVERSIDADE FEDERAL
DE SANTA CATARINA
Campus de Blumenau

Work Title

First Author Name [1] **(University)**

Co-author 1 Name (University)
Co-author 2 Name (University)

First author e-mail[1]

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Abstract

The general objective of this work was to perform a theoretical study about ...

Introduction

Briefly introduce the broad field of your research. E.g: Several fields of science make use of Optimization to aid in decision making. In particular, this is observed in ... Cite like this [3, 4]. Example equation:

$$\begin{aligned} &\min_x f(x) \text{ with } x \in \mathbb{R}^n \\ &s.a\ g(x) \leq 0, \end{aligned} \tag{1}$$

where the functions $f : \mathbb{R}^n \to \mathbb{R}$ and $g : \mathbb{R}^n \to \mathbb{R}$ are continuously differentiable.

Methodology

Figure Example:

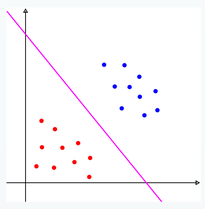

Figure 1 Linear.

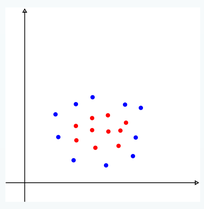

Figure 3 Non linear.

Subsection 1

Theorem 1 *Consider the quadratic problem*

$$\begin{aligned} &\min_x f(x) = x^T H x + c^T x \\ &s.a\ Ax + b \leq 0, \end{aligned} \tag{2}$$

where $H \in \mathbb{R}^{n \times n}$ is symmetric, $c \in \mathbb{R}^n$, $A \in \mathbb{R}^{m \times n}$ and $b \in \mathbb{R}^m$. Suppose that its feasible set is non-empty and that the objective function is bounded below in this set. So the problem has a global minimizer.

Subsubsection (if necessary)

For this problem, we can guarantee the existence of a solution for the specific case. We deal with obtaining .... because we can not guarantee ... has a unique solution and we show Example 1 for which the dual has infinite solutions.

Example 1 *Consider the following set, ...*

In the light of this example, we present two definitions present in the literature [1, 2].

Definition 1 *Definition Example*

Subsection 2

Numerical Results

Conclusions

The main contributions of this work are:

- Conclusion 1
- Conclusion 2.
- ....
- ....
- .....

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