

Stefano's awesome MATH1058 coursework report

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Abstract

This document reports on something really interesting, hopefully.

1 Introduction

We consider, in this work, a definitely relevant problem which, in formal terms, can be expressed as follows:

Very Interesting Problem (VIP): Given a quite relevant set of givens $A \in \mathbb{R}^{m \times n}$, $b \in \mathbb{R}^n$, $c \in \mathbb{R}^n$, the VIP problem calls for a very, very relevant solution $x \in \mathbb{R}^n$ which satisfies the following very, very, very (!) relevant property:

$$z = \max_{x \in \mathbb{R}_+^n} \{cx : Ax \leq b\} \quad (1.1)$$

Relying on Equation (1.1), the algorithm computes x proceeding according to the following pseudocode:

```
Data: this text
Result: how to write algorithm with LATEX2e
1 initialization;
2 while not at end of this document do
3   read current;
4   if understand then
5     go to next section;
6     current section becomes this one;
7   else
8     go back to the beginning of current section;
9   end
10 end
```

Algorithm 1: How to write algorithms.

The pseudocode reported in Algorithm 1 was taken from [?].¹

2 Solution approach and implementation

We had a great solution idea, which we implemented in the following beautiful piece of Python code:

¹Actually, it was not, but I thought that citing myself was a good idea.

```

1 def beautiful_function(myUnusedInput, mySecondUnusedInput):
2     if do_something_awesome() == True:
3         return youWillNeverBugOutOnMe
4     else:
5         return myVeryUndefinedOutput

```

3 Experimental results and analysis

We have run a set of experiments on this very costly piece of hardware: *xxx*. Our findings are summarized in the quite colorful Figure 1.

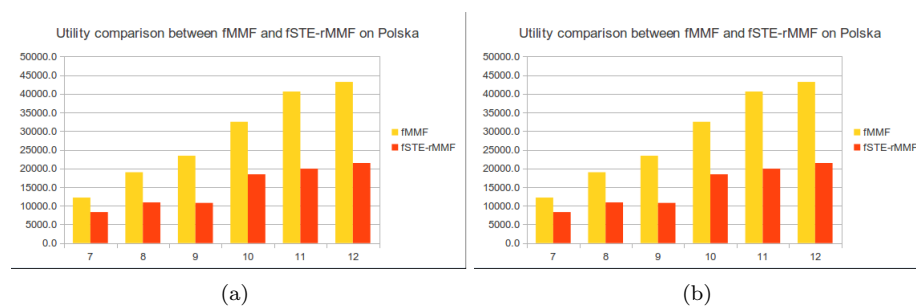


Figure 1: One very nice chart entirely unrelated to this coursework (a) and an apparently very similar chart stil unrelated to this coursework (b).

We should not forget to explain what conclusions the figure allows us to draw, nor why.

Also, including a table may be a good idea. Take a look at Table 1:

Table 1: A nice table. Notice that captions preceed tables, whereas they follow figures.

header	header2	header3
name1	12	12
$s = S $	5	42

4 Conclusions

We have reported on a set of quite interesting findings.

References

- [1] S. Coniglio. MATH1058 Lecture Slides. Blackboard. Accessed: 2018-03-7.