



**Caixa Mágica**  
s o f t w a r e

## **Summer Internships 2017**

Schedule Optimiser

**Weekly Report - 24/07/2017-28/07/2017 (Week 3)**

**Trainee: Daniel Ramos**

**Mentor: Afonso Ribeiro**

**Co-Mentor: Vítor Martins**

## **Summary:**

The algorithm has been fully implemented, it works on a daily basis and each iteration takes up to 5 minutes (1 iteration per day). From what has been tested so far there's little difference between the original solution and the optimised solution, the gains are in range of 15 to 60 minutes per day. On the other hand, much better results seem to be achieved if the restrictions of work areas are ignored (ignoring those restrictions means workers can travel anywhere), results can be as good as 4 hours less of travel time.

However, these results might not be accurate, since the algorithm hasn't been tested exhaustively, there's a chance it might be producing wrong results.

## **Completed tasks:**

- Implement the algorithm (now in C#) and integrate it into existing codebase.
- Implement tests to ensure the algorithm's working correctly.

## **To-do:**

- Test the algorithm exhaustively.
- Understand what else can be done, which restrictions can be relaxed or changed, etc.
- Develop a graphical interface to help the visualisation of the algorithm's execution and its solutions.