

# Graduation Thesis Master: Machine Learning decision tree for slow movers



**Are you looking for a graduation master internship? Gordian offers an internship for a graduate student, starting September 2021**

## Assignment

The clients of Gordian are dealing with slow moving parts, which means that there is not a lot of historical demand data available. Therefore, computing a forecast based on historical demand becomes challenging. That is why we also use other input sources, such as business knowledge of engineers, the installed base, criticality analysis and general part information (such as failure prediction, MTBF, etc.). However, we would like to have a standard model to come up with the optimal stocking strategy.

Your assignment is to create an inventory strategy for slow-moving items which provides outcomes on whether or not to stock a part, quantities, locations, etc. To do so, we like you to develop several decision trees with which we can determine the optimal strategy per item. Using machine learning techniques, you will create the input and content of the decision trees. By calculating different scenarios, you find out which techniques give us the best trade-off between downtime and inventory costs. Finally, you show the improvement of the new model by computing the new balance between stock availability, ordering costs, and stock value and compare these results with other solutions.

## Who is Gordian?

Gordian Logistic Experts B.V. is a renowned management consultancy, service provider and software supplier, specialised in service logistics and spare parts management in the capital-intensive market. Gordian assists companies with complex service logistics issues through training, advice and secondment. With about 30 people, Gordian operates from offices in Maarsse and Cape Town, [check www.gordian.nl](http://www.gordian.nl).



## Our expectations

- You are a student graduating, preferably, in Econometrics, Mathematics or Industrial Engineering with a significant portion of statistics and mathematics
- Excellent analytical skills
- Good communicative skills and a real team player
- Dutch and English speaking

## Our offer

- Active supervision for your Master thesis
- An open culture
- A team with young colleagues, a sense of humour and room for personal responsibility
- A workplace in a beautifully restored mansion in the centre of the country
- An internship compensation

## And...

Get to know the team of Gordian in a different way during the joint lunch, hopefully on a short term, or during sporty and challenging team outings. And if you want to help organise the events, that is also possible!



## Interested?

If you have any questions, please contact Rogier Zoun, 06 – 250 48 792  
Send your cv and motivation letter to Marijcke Langhout: [m.langhout@gordian.nl](mailto:m.langhout@gordian.nl)

