Thomas Huijskens

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Education

October 2014 - October 2015 — **MSc in Applied Statistics**, *University of Oxford*.
Graduated with distinction.

Master thesis — Based on a gigabyte-scale data set of taxi trajectories, I developed a machine learning pipeline that predicts the total travel time of a taxi trip, when the destination is unknown.

Selected courses:
- Machine learning (data compression, clustering, neural networks, random forests, support vector machines, model ensembles).
- Markov chain Monte Carlo methods (Gibbs sampling, Metropolis-Hastings sampling, reversible jump and sequential Monte Carlo methods).

September 2010 - July 2013 — **BSc in Applied Mathematics**, *Delft University of Technology*, GPA: 8.4/10.
Graduated with distinction.

Bachelor thesis — I developed and implemented numerical methods that solve backward stochastic differential equations. I analysed the performance and complexity of the methods on a number of toy problems from mathematical finance.

September 2012 - February 2013 — **Semester abroad**, *ETH Zürich, Department of Mathematics*, GPA: 8.6/10.
As part of my BSc studies, I studied abroad at ETH Zürich. I completed a selection of courses that were part of the MSc in Statistics, and the MSc in Quantitative Finance at ETH Zürich.

Experience

November 2015 - Present — **Data scientist**, *Tesco PLC*, London.
As a Data Scientist in the Clubcard Analytics team I build out data products and do product deep-dive research for the other teams within Clubcard, based on terabytes of customer data. I have been part of a number of projects, including but not limited to:
- Building a forecasting pipeline that estimates baseline sales figures for 500,000 different products as part of a bigger model for promotion profitability.
- Enabling better customer targeting for CRM email campaigns by building out customer targeting optimisation models.

September 2013 - September 2014 — **Data analyst (part-time)**, *MIcompany B.V.*, Amsterdam.
MIcompany is a commercial analytics consultancy that helps companies grow by specialised data analysis. I supported (senior) consultants with analyses based on complex data sets. My work involved data mining and analysis, visualising results and statistical modeling on gigabyte-scale data sets. My responsibilities included:
- Developing Bayesian regression models to identify the effect of insurance pricing on different customer segments and to show the potential result of a new pricing structure.
- Developing time series models for the sales data (480 million entries) of a large retail firm to extract business insights on turnover and customer behavior during a promotional period.

Skills and additional information

Programming — Scala, Apache Spark, Python (numpy, scikit-learn, pandas), R (ggplot2, dplyr, tidyr), Hive, Impala, Hadoop, Bash, Git.

Citizenship — Dutch and U.S. citizenship.

Publications

T.P. Huijskens, M.J. Ruijter, C.W. Oosterlee, Efficient numerical Fourier methods for coupled forward-backward SDEs, Journal of Computational and Applied Mathematics 296 (2016): 593-612.