

PhD Position in Data Science (Marketing Analytics)

Tilburg University (4 year project)

The Tilburg School of Economics and Management (TiSEM) in collaboration with the Tilburg School of Social and Behavioral Sciences (TSB) has a PhD position in Data Science available (4 years), starting as early as December 2017.

Description

In many domains, the last decades have seen a shift away from reactive towards proactive interventions. While the former take place after a critical event, the latter are meant to prevent this event from happening. This shift has been facilitated by the growing amount of data and the emergence of powerful prediction models that can anticipate critical events. Examples of this transition can be found in healthcare (e.g. early disease detection), law (e.g. proactive crime policies), risk management (e.g. credit scoring) and marketing (customer churn). Despite this trend, many companies and public actors struggle to balance the pros and cons of proactive and reactive interventions.

This PhD project will address this tradeoff in an exemplar business domain: customer retention programs, quoted the no1 priority of CEO's and CMO's (Forbes 2011, 2014). Many firms rely on reactive retention programs, mostly because they lack sufficient analytic resources to be proactive, or for fears of financial consequences associated with false positives and negatives. The advantages and drawbacks inherent to reactive vs. proactive interventions suggest that firms might be better off combining both approaches, and in particular, by determining for every customer, the optimal contact timing. Surprisingly, there is barely any research that guides the decision maker in this choice. Our ambition is to develop a (Bayesian) decision theoretic approach using a combination multi-armed bandit and machine learning classification methods to optimize the actions of the firm.

The PhD candidate will conduct his/her research under the supervision of Dr. Aurélie Lemmens:

(<https://www.tilburguniversity.edu/webwijs/show/a.lemmens.htm>)

and Prof. Dr. Maurits Kaptein:

(<https://www.tilburguniversity.edu/webwijs/show/m.c.kaptein/>).

The project is funded by the Data Science Center Tilburg.

The positions include allowances for research expenses, including computer, participant costs, experimental materials, and travel and subsistence costs towards project-specific travel, including conferences. The positions also offer an opportunity to gain experience with teaching, subject to availability and qualifications.

Requirements

You have or are about to finish a (research) MSc in Economics, Business, Marketing, Econometrics or related discipline. You have an interest in Big Data,

Data Science, Machine Learning and/or Marketing Analytics. You have experience of designing, executing, and analyzing quantitative research. Your written and spoken English are excellent and you have a strong interest in pursuing a scientific career. You also have good research project management skills and the ability manage workload and resources to meet deadlines. You are willing and able to travel internationally (costs will be covered by the project grant).

Conditions of employment

The position preferably starts in December 2017 but a later date may be considered. Tilburg University offers outstanding employee benefits, as well as an inspiring work environment and exciting campus life. We offer a full time temporary appointment for a period of 4 years. The gross monthly salary will be in accordance with the salary scales for PhD candidates at Dutch universities, i.e. ranging from €2,191 in the first year to €2,801 in the final year. The Collective Labour Agreement for Dutch Universities is applicable. Researchers from outside the Netherlands may qualify for a tax-free allowance equal to 30% of their taxable salary. The university will apply for such an allowance on their behalf. All university employees are covered by the so-called civil servants pension fund (ABP). The university offers very good fringe benefits such as an options model for terms and conditions of employment, excellent reimbursement of moving expenses, excellent technical infrastructure and sports facilities.

Interested?

If you are interested in this position, please send a short letter motivating your interest and your resume to m.c.kaptein@uvt.nl and/or A.Lemmens@uvt.nl.

Contract type: Temporary, 4 years

Employer: Tilburg School of Economics and Management

Tilburg School of Economics and Management (TiSEM) is the university largest faculty. TiSEM offers well reputed academic research and education. Its research belongs to the European top. The education programs, of which the majority are offered completely in English, are on the international map with the AACSB accreditation awarded in 2002. Employees and students form an ambitious international community.

[Tilburg School of Economics and Management](#)

Tilburg School of Social and Behavioral Sciences

Tilburg School of Social and Behavioral Sciences (TSB) is a modern, specialized university. The teaching and research of the Tilburg School of Social and Behavioral Sciences are organized around the themes of Health, Organization, and Relations between State, Citizen, and Society. The Schools inspiring working environment challenges its workers to realize their ambitions; involvement and cooperation are essential to achieve this.

[Tilburg School of Social and Behavioral Sciences](#)