



# Yanou Ramon

## Curriculum Vitae

September 13, 1995 • Prinsstraat 13, 2000, Antwerp (Belgium)

University of Antwerp, Dpt. Engineering Management

Phone: (+32) 497 901 304

Email: [yanou.ramon@uantwerp.be](mailto:yanou.ramon@uantwerp.be)

Github:



LinkedIn:



## Research Interests

Behavioral Big Data; Text Data; (Explainable) Data Mining; Data Science; Predictive Modeling; Computer-Human Interaction; Automated Decision-Making

Businesses and government that use humanly-generated “big data” (e.g., social media data, location data) can improve decision making, however, it remains a question to them how a prediction model trained on these data makes decisions, either because of the thousands of variables it uses (for example, each individual payment is a variable in the model), or because of the nonlinear model structure (e.g., Deep Learning), or both. These models are referred to as a “black-box”. My research investigates techniques to open this “black-box” so that users can validate and trust model predictions, improve prediction models, and gain insight from and interact with these models. Model explanations are investigated both on the instance level (*Which payments contributed to this loan applicant being classified as likely to default?*) and the global level (*Which payment behaviour leads to classifying someone as high default risk?*).

## Education

### Ph.D. Fellowship in Fundamental Research

2018/22

Fellowship by Research Foundation-Flanders • University of Antwerp, Belgium • Supervisor: Prof. David Martens (Applied Data Science)

### Master of Science (M. Sc.), Business Engineering (Finance)

2016/18

University of Antwerp, Belgium, Faculty of Business and Economics • magna cum laude • major: European and International Business • passionate about data science and analytics

### Bachelor of Science (B. Sc.), Business Engineering

2013/16

University of Antwerp, Belgium, Faculty of Business and Economics • magna cum laude

### Equivalent to ‘A’ Levels successfully completed

2007/13

Sint-Rita College in Kontich, Belgium • magna cum laude • main courses: sciences and mathematics



## Publications

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### *Peer-reviewed journal articles*

De Cnudde, S., Ramon, Y., Martens, D., Provost, F. (2019). Deep Learning on Big, Sparse, Behavioral Data, *Big Data*, 7(4), pp.286-307.

### *Manuscripts under review*

Ramon, Y., Martens, D., Provost, F., Evgeniou, T. (under review). Instance-level Explanation Algorithms SEDC, LIME, SHAP for Behavioral and Textual data: a Counterfactual-Oriented Comparison.

Ramon, Y., Martens, D., Evgeniou, T., Praet, S. (under review). Improving the Cost of Explainability for High-Dimensional, Sparse Data using Metafeatures-based Rule-Extraction.

### *Conference Talks*

Ramon, Y., Martens, D. (March 2019). Instance-based Explanations: Motivation, Overview, and the Evidence Counterfactual Approach. European Conference on Data Analytics (ECDA). Bayreuth, Germany.

Ramon, Y., Martens, D. (June 2019). Instance-level explanation algorithms SEDC, LIME, SHAP. EURO Conference. Dublin, Ireland.

## Specialization & work experience

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### Teaching assistant

Since October 2018

University of Antwerp, Belgium, Faculty of Business and Economics • responsible for Data Science challenge and Python tutorials for *Data Mining* Master's course (Prof. Martens) • teaching assistant of *Ethics in Data Science*, *Cases & Trends in Data Science*, and *Data Engineering*

### Co-organizer Summer School Washington D.C.

July 2020

University of Antwerp, Belgium, Faculty of Business and Economics • responsible for organizing the summer school "The American Business Environment" in Washington with a group of +25 Master's students

### McKinsey & Company Next Generation Women Leaders Event Paris

May 2018

3-day workshop in Paris organized by McKinsey & Company • Inspirational speakers, case study, and opportunity to meet other female students and young professionals from all over the world

### Member of Beta Gamma Sigma Honor Society – "Best in business"

Since November 2017

Honor of Academic Excellence • Part of top business students worldwide at universities with AACSB accreditation • *Membership benefits*: vast networking and leadership opportunities, and career resources

### Erasmus Fall Semester Exchange (Toulouse, France)

2017

Toulouse School of Management (Université Toulouse Capitole 1) • *Outcomes*: international networking, improved French and English communication and personal development

### Summer School "The American Business Environment" (Washington DC, USA)

July 2016

Georgetown University • Lectures, company visits, networking events, visits to Federal Reserve and IMF



**(Pre-)Junior Management Program (Antwerp, Belgium)**

**2016/18**

University of Antwerp • 25 students selected by the Dean based upon grades and extracurricular activities • soft-skill workshops organized by a variety of companies • *Outcomes*: professional goal-setting, personal development, developed managerial skills

**Student Worker Radiology Department (Sint-Niklaas, Belgium)**

**2013/15/16**

Logistic tasks, editing timetables for the workforces and completing databases

**Hostess MC Challenge (Brasschaat, Belgium)**

**2013/16**

Promoting companies' products, conducting face-to-face surveys for clients such as BMW and welcoming guests at events • *Outcomes*: assertiveness, customer orientation, communication

**Language Summer School (Santa Barbara, USA)**

**July 2012**

EF Language Institute • First independent travel experience • English courses with computer labs, lectures and activities • *Outcomes*: enhanced English communication, intercultural experience, independency

**Extracurricular activities**

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**Field hockey player at Braxgata Hockey Club (Antwerp, Belgium)**

Since 2013: 2<sup>nd</sup> Ladies Team • 2007-2012: Provincial Team of Antwerp, U15/16 National Team • 2001-2006: Teams at Braxgata • *Outcomes*: optimized team's potential by combining different qualities of different players, recognized the importance of team values such as dedication and hard work

**Member of Sportclub Eiland (Antwerp, Belgium)**

Yoga and pilates, cycling, body workouts • *Outcomes*: increased energy level, enhanced stress-resistance

**Languages**

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Dutch: native language

English: advanced (writing, listening and speaking) – C1 level

French: advanced (writing, listening and speaking) – C1 level

**IT skills**

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Mathematical and statistical software: MATLAB, SAS, STATA, SPSS, JMP Pro

Programming languages: Python (advanced), R (advanced), SQL (basic), pseudocode

Industry-standard software: Windows, Access and MS Office (incl. Outlook, Excel, Word and PowerPoint)