



Yanou Ramon

Curriculum Vitae

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

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Research Interests

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

Business and government that use **humanly-generated “big data”** (e.g., social media data, payment data, location data) can improve decision-making, however, it remains a question how the prediction models 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 so-called “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 transaction behaviours lead 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 • Faculty of Business & Economics
• Supervisor: Prof. David Martens (Applied Data Mining)

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

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. (2020). Instance-level Explanation Algorithms SEDC, LIME, SHAP for Behavioral and Textual data: a Counterfactual-Oriented Comparison. (*Forthcoming in Advances in Data Analysis and Classification*).

Ramon, Y., Martens, D., Evgeniou, T., Praet, S. (2020). Improving the Cost of Explainability for High-Dimensional, Sparse Data using Metafeatures-based Rule-Extraction. (*under review*).

Conference Talks

Ramon, Y., Martens, D. (2019). Comparative study of instance-level explanations for big, sparse data. EURO Conference. Dublin, Ireland.

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

Specialization & work experience

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 • 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

Education

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

2016/18

University of Antwerp, Belgium • magna cum laude • major: European and International Business • passion for data science and analytics

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

2013/16

University of Antwerp, Belgium • 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

Extracurricular activities

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

Since 2013: 2nd 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

Languages

Dutch: native language

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

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

IT skills

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

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

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