

# Eduardo Wilde Barbaro

**Born:** Sao Paulo, Brazil.

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## Experience:

### February 2016 – Present: Data Scientist

*Company:* Mobiquity Inc

*Based in:* Amsterdam, the Netherlands

*Description:* I collect, mine, and manage big data sets at Mobiquity. As a Data Scientist, I use cutting-edge analytical techniques to design innovative data-driven business solutions. I also love to work on behavior analytics. I analyze short- and long-term behavior patterns to tailor interventions based on an individual's preferences and needs. Besides that, I enjoy being part of a team while still having the freedom to develop my own ideas. Other activities such as mentoring students are also a part of my day at Mobiquity.

### April 2015 – December 2015: Data Analyst

*Company:* Easytobook.com

*Based in:* Amsterdam, the Netherlands

*Description:* I managed the modelling, development, and optimization of data mining algorithms for several travel communities, such as TripAdvisor, Trivago, and Google. I was involved in the design, exploration, building and validation of models, and in the research of techniques looking for relations among internet marketing variables.

### September 2010 – March 2015: Researcher

*Company:* Wageningen University

*Based in:* Wageningen, the Netherlands

*Description:* My research focused on understanding and quantifying the interaction between turbulence and aerosols in the atmosphere. Specifically, it addressed the coupling between aerosols, radiation and the land-atmosphere-turbulence system combining a 3D numerical framework (large-eddy simulation) with large datasets of meteorological observations.

## Formal Education:

### 2010 – 2015: PhD degree in Atmospheric Sciences

Wageningen University, Meteorology and Air Quality Department, the Netherlands.

*Thesis:* Interaction between aerosols and convective boundary-layer dynamics over land

*Keywords:* Turbulence, Aerosols, Statistical Analysis, Big data, 3D-numerical modelling

### 2009 – 2010: MSc degree in Meteorology

University of São Paulo, Institute of Astronomy, Geophysics and Atmospheric Sciences, Brazil.

*Thesis:* Investigation of Nocturnal Planetary Boundary Layer in the Metropolitan Area of São Paulo.

*Keywords:* Turbulence, Statistical algorithms, Partial differential equations, Big data, empirical formulations

**2005 - 2008:** BSc in Meteorology (*with honors: first in class*).

University of São Paulo, Institute of Astronomy, Geophysics and Atmospheric Sciences, Brazil.

*Research (published):* Observational Study of Longwave Radiation in the City of São Paulo.

*Keywords:* Radiation, Meteorology, Neural Networks, Big data, empirical formulations

**2002-2003:** Electronics technician education.

Technical school Getúlio Vargas, Brazil.

### **Complementary Education:**

**2016:** Practical Predictive Analytics: Models and Methods, *Univ. of Washington on Coursera*.

**2016:** AWS Technical Professional, *Amazon web services*.

**2016:** Data Manipulation at Scale: Systems and Algorithms, *Univ. of Washington on Coursera*.

**2015:** Database master (SQL and MongoDB). *Code School*

**2015:** R on machine learning certification. *DataCamp*.

**2012:** Scientific writing course (hours: 20h). *Language Services, Wageningen University*.

**2010:** Biochemistry and physics of the lower atmosphere (hours: 40h). *Cyprus Institute, Cyprus*.

**2009:** Message Passing Interface - MPI. (hours: 20h). *LAG - USP*.

**2008:** Introduction to Computational Fluid Dynamics. *Inst. of Mathematics and Statistics - USP*.

**2008:** Numerical Treatment of differential equations. *Inst. of Mathematics and Statistics - USP*.

**2007:** Statistical methods and exploratory analysis. *Institute of Mathematics and Statistics - USP*.

**2006:** Linear Algebra. (hours: 120h). *Institute of Mathematics and Statistics - USP*.

### **Computational Skills:**

**Programming languages:**R, Python, SQL, and Fortran (fluent), C (intermediate), Java (Basic)

**Design and composition:** MS office (advanced), LaTeX (advanced), Corel Draw (advanced)

**Data analysis software:** Origin, Statistica, Python, R

**Numerical Models:** Random Forest, Neural Network, Clustering, Bidding algorithm, LES

**Platforms:** Mac, Windows, Linux

**Miscellaneous knowledge:** (i) Message passing interface (MPI), (ii) Big data: process, analysis, and interpretation, (iii) Machine learning (iv) Diverse statistical tools

### **Languages:**

**Portuguese:** Native.

**English:** Fluent (TOEFL IBT test: **105/120**)

**Spanish:** Working proficiency

**Dutch:** A2 level (and learning)

### **Conference/Meeting organization:**

**2015 – present:** Co-organization of the meetup “Digital Analytics” (>450 members)

**2012:** Co-organization of the 5-day course entitled “Bridging the gap between atmospheric scales” (50 people)

## Projects:

- 2016:** Clustering with optimised weights for Gower's metric
- 2016:** Modelling User Engagement in Mobile Applications
- 2015:** Bid Recommendation Automated Intelligence Network
- 2013-2014:** Model simulation of the morning transition effect on boundary layer dynamics and chemistry during the PEGASOS campaign in the Netherlands
- 2010-2015:** Interaction between aerosols and boundary-layer dynamics over land
- 2009-2010:** Investigation of nocturnal boundary layer in the metropolitan area of São Paulo
- 2005-2010:** Observational study of longwave radiation in the city of São Paulo

## Academic Advising:

- 2016:** Principal MSc advisor of Jeroen van den Hoven, *Vrij University*.
- Thesis:** Clustering with optimised weights for Gower's metric: Using hierarchical clustering and quasi-Newton methods to maximise the cophenetic correlation coefficient.
- 2013 - 2014:** Principal MSc advisor of Dimitra Kalosynaki, *Wageningen University*.
- Thesis:** Model simulation of the morning transition effect on boundary-layer dynamics and chemistry during the PEGASOS campaign in the Netherlands.

## List of publications:

<https://scholar.google.nl/citations?hl=en&user=kOMk-s4AAAAJ>

## Selection of Awards and Prizes:

- 2015** – Excellent education prize, *Wageningen University*, the Netherlands.
- 2014** – Young scientist travel award, *European Meteorological Society*, Germany.
- 2013** – Member of the Boundary-layers and Turbulence committee, *American Meteorological Society*, USA.
- 2012** – LEB foundation grant, *Wageningen University*, The Netherlands.
- 2009** – CREA Prize: best overall BSc student (2005-2008), *Engineering, Architecture and Agronomy Council*, Brazil.
- 2008** – USP-Rutgers Exchange program: *Rutgers University*, USA.
- 2006** – Best presentation in the radiation and remote sensor area at the Brazilian Conference of Meteorology, *Brazilian Meteorological Society*, Brazil.