

# BRUNA WUNDERVALD

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## SUMMARY

I am a statistician, reproducible research enthusiast, R and git lover and active user. I like statistical modelling in general, package and dashboards development, text mining and APIs. I am specially interested in Bayesian inference, multivariate analysis, feature extraction and probabilistic graphical models.

Currently, I am pursuing my PhD at the Hamilton Institute in Maynooth, Ireland. I am a part of Andrew Parnell's research group, and our work is mostly related to the development of new Bayesian methods for machine learning and its many possible applications.

## EXPERIENCE

### Statistician

#### Priced

2018    São Paulo, São Paulo, Brazil

- Analysis of expenditure data in Brazil: data wrangling, product elasticity and churn, consumers clusterization and general behaviour.

### Statistics Intern

#### City Hall of Pinhais

2017    Pinhais, Paraná, Brazil

- Geostatistical data analysis on the financial situation of the people living in Pinhais.

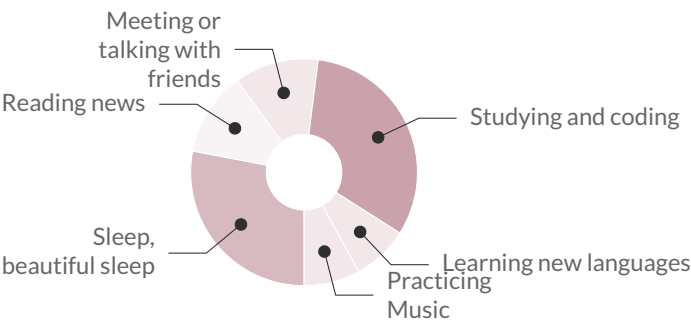
### Statistics Intern

#### Bradesco Bank

2016-2017    Curitiba, Paraná, Brazil

- Credit risk modelling with logistic regression.

## A DAY OF MY LIFE



## EDUCATION

### Ph.D. candidate in Statistics

#### Maynooth University

Sept 2018 - \*

Thesis theme: Bayesian Machine Learning

### Honours Bachelor degree in Statistics

#### Federal University of Paraná

April 2013 - August 2018

Thesis theme: Machine learning and chord based feature engineering for genre prediction in popular Brazilian music

## PROJECTS



### R-Ladies Organizer

São Paulo and Curitiba chapters, <https://rladies.org/>



### R-Music Blog

<https://r-music.rbind.io/>

## STRENGTHS

Bayesian Methods

Multivariate

Statistics

Variational Inference

R

tidyverse

Shiny

Python

JAGS & Stan

Git

GitHub

HTML

CSS

LaTeX

## LANGUAGES

English

● ● ● ● ●

Portuguese

● ● ● ● ●

French

● ● ● ● ●

Spanish

● ● ● ● ●

Italian

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Russian

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## REVIEWER

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- **rOpenSci** - R Packages Reviewer. 2018 - Current.
- **TEMA: Trends in Applied and Computational Mathematics** - Journal Articles Reviewer. 2019 - Current.

## PUBLICATIONS

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### Books

- P. E. UFPR, *Git manual, project of tutorial extension in statistics*. 2016.

### Journal Articles

- B. D. Wundervald and W. M. Zeviani, "Machine learning and chord based feature engineering for genre prediction in popular Brazilian music," Feb. 2019. arXiv: [1902.03283](https://arxiv.org/abs/1902.03283). [Online]. Available: <http://arxiv.org/abs/1902.03283>.

### R Packages on CRAN

- B. D. Wundervald, *Chorrrds: Music chords extraction*, R package version 0.1.8, 2018. [Online]. Available: <https://CRAN.R-project.org/package=chorrrds>.
- B. Wundervald, *Vagalumer: Access to the 'vagalume' api*, R package version 0.1.6, 2017. [Online]. Available: <https://CRAN.R-project.org/package=vagalumeR>.

### Miscellaneous

- B. Wundervald, F. Lima, and S. Ferrari, *Distributions on the unit interval catalog*, Shiny Application, 2018. [Online]. Available: <https://brunaw.shinyapps.io/dissertacao-francimario/>.
- B. Wundervald and W. Zeviani, *Non-linear models catalog*, Shiny Application, 2017. [Online]. Available: <https://github.com/brunaw/catreg>.
- B. Wundervald, *R-music: Introduction to the vagalumer package*, 2018. [Online]. Available: <https://r-music.rbind.io/posts/2018-11-22-introduction-to-the-vagalumer-package/>.
- B. Wundervald and J. Trecenti, *R-music: Introduction to the chorrrds package*, 2018. [Online]. Available: <https://r-music.rbind.io/posts/2018-08-19-chords-analysis-with-the-chorrrds-package/>.
- B. Wundervald and T. M. Dantas, *R-music: Rspotify*, 2018. [Online]. Available: <https://r-music.rbind.io/posts/2018-10-01-rspotify/>.
- B. Wundervald and J. Trecenti, *R-music: Music21*, 2018. [Online]. Available: <https://r-music.rbind.io/2018-10-06-music21>.
- B. Wundervald, *R-music: Connecting packages*, 2019. [Online]. Available: <https://r-music.rbind.io/posts/2019-03-13-connecting-packages/>.

## TEACHING EXPERIENCE

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| 2019      | Building R packages Workshop, <i>University College Dublin</i> , April 2019.                                 |
| 2019      | Deep Learning for Statisticians, Instructor, <i>XVI School of Regression Models</i> , March 2019.            |
| 2019      | Statistical Machine Learning, Tutoring, <i>Maynooth University</i> , 1st Semester.                           |
| 2018      | Linear Models 2, Tutoring, <i>Maynooth University</i> , 2nd Semester.  |
| 2018-2019 | R-Ladies Meetup Presentations <i>Curitiba and São Paulo, Brazil</i> .  |
| 2017      | R Markdown, Taught Short Course, <i>Federal University of Paraná Curitiba, Brazil</i> , 20h, September 2017. |

## GRANTS

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| 2019 | <i>Women in Data Science</i> , Travel & Conference Scholarship, Zurich, Switzerland.  |
| 2019 | <i>rstudio::conf</i> , Travel & Conference Scholarship, Austin, Texas.  |
| 2017 | Scientific Initiation, supervised by Prof. PhD Wagner Hugo Bonat, <i>Construction of Multivariate Probability Distributions</i> . Duration: 12 months |
| 2016 | Project of Tutorial Extension in Statistics, supervised by Prof. Dr. Walmes Marques Zeviani, <i>Non-Linear Models Catalog</i> . Duration: 10 months   |
| 2015 | Laboratory of Applied Statistics, supervised by Prof. Dr. Cesar Augusto Taconeli and Prof. Dr. Fernanda Buhner Rizzato. Duration: 6 months            |
| 2014 | Teaching Initiation Program, supervised by Prof. Dr. Jomar Camarinha Filho Course: Basic Statistics. Duration: 4 months                               |
| 2014 | Teaching Initiation Program, supervised by Prof. Dr. Jomar Camarinha Filho Course: Statistics II. Duration: 4 months                                  |

## ORAL COMMUNICATIONS

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- 2019 Chord Based Feature Extraction for Genre Classification in Popular Brazilian Music, *XVI School of Regression Models*, Pirenópolis, Brazil, March 2019.
- 2018 Construction and Implementation of Multivariate Dispersion Models, *63rd meeting of the Brazilian Region of the IBS* Curitiba, Brazil, May 2018.
- 2018 Music Data Analysis with R, *R Day - First national meeting of R users* Federal University of Paraná Curitiba, Brazil, May 2018.
- 2016 Non-Linear Models Catalog, *Integrated Week of Teaching, Research and Extension*, Federal University of Paraná Curitiba, Brazil, 2016.
- 2015 Results of the Applied Statistical Analysis Laboratory, *Integrated Week of Teaching, Research and Extension*, Federal University of Paraná, Curitiba, Brazil, 2015.

## SHORT COURSES ATTENDED

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- 2019 Statistical Modelling, *University of Southampton*, 12h
- 2019 Applied Stochastic Processes, *University of Southampton*, 12h
- 2019 Applied Machine Learning, *Rstudio Conference 2019*, Austin, Texas, 12h
- 2018 Statistical Computing, *Cambridge University*, 12h
- 2018 Statistical Inference, *Cambridge University*, 12h
- 2018 Web Scraping with R, *Curso-R*, 8h.
- 2018 Introduction to Cognitive Diagnostic Models with Stan, *Federal University of Paraná*, 2h.
- 2018 Distributed data structures with R, *Federal University of Paraná*, 2h.
- 2018 Dashboards with R, *Curso-R*, 4h.
- 2018 Probability Theory, *University of São Paulo*, 60h.
- 2017 Machine Learning with R, *University of São Paulo*, 4h.
- 2017 APIs with R, *University of São Paulo*, 4h.
- 2017 Multivariate Covariance Generalized Linear Models for the Analysis of Experimental Data, *Federal University of Lavras*, 4h.
- 2017 Regression models for count data: beyond the Poisson model, *Goiânia, GO, Brazil*, 4h.
- 2017 Elements of Computational Statistics, *Federal University of São Carlos*, 6h.
- 2016 Modelling with SAS, *HSBC Bank Brazil*, 20h
- 2016 Statistical Modelling Academy, *HSBC Bank Brazil*, 192h.
- 2015 Conversation in English, *English without Borders*, Federal University of Paraná, 16h.

## POSTER PRESENTATIONS

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- 2019 Construction and Implementation of Multivariate Dispersion Models, *XVI School of Regression Models*, Pirenópolis, Brazil, March 2019.
- 2018 Chord Based Feature Extraction for Genre Classification in Popular Brazilian Music, *1st WiMIR*, Paris, France, September 2018.
- 2017 Non-Linear Models Catalog, *XV School of Regression Models*, Goiânia, Brazil, March 2017.
- 2016 The use of R at Federal University of Paraná, *I International Seminar of Statistics with R*, Niterói, Rio de Janeiro, Brazil, May 2016.

## REFEREES

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### Prof. PhD Wagner Hugo Bonat

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### Prof. PhD Paulo Justiniano Ribeiro Júnior

@ Department of Statistics

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### Prof. Dr. Victor Fossaluzza

@ Institute of Mathematics and Statistics

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University of São Paulo  
+55 11 3091-6187

- 2015 English for Professional and Academic Goals,  
*English without Borders*,  
*Federal University of Paraná*, 16h.
- 2015 English with Music, *English without Borders*,  
*Federal University of Paraná*, 16h.
- 2015 Advanced Excel, *Center of School-Enterprise Integration of Paraná*, 20h.