# BRUNA WUNDERVALD

@ brunadaviesw@gmail.com  📞 +353 087 1877 482  📍 Hamilton Institute, Maynooth, Ireland  🔗 http://brunaw.com/
🐦 @bwundervald  ⌨ github.com/brunaw

## 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.
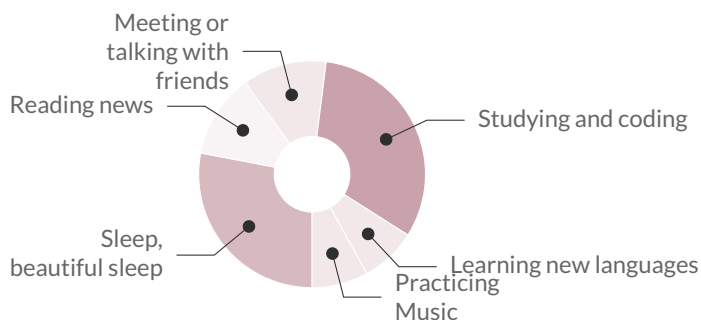
### Statistics Intern
**Bradesco Bank**

📅 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/

**Non-Linear Models Catalog**
https://github.com/leg-ufpr/nlmSet

## STRENGTHS

Bayesian Methods   Multivariate   Statistics   Variational Inference

R   tidyverse   Shiny   Python   JAGS & Stan   Git   GitHub   HTML   CSS   Julia   LaTeX

## LANGUAGES

**English** ●●●●●

**Portuguese** ●●●●●

**French** ●●●●○

**Spanish** ●●●●○

**Italian** ●●●○○

**Russian** ●○○○○

# REVIEWER

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

# PUBLICATIONS

### 📕 Books

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

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### 📄 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`. [Online]. Available: `http://arxiv.org/abs/1902.03283`.

### </> R Packages, on CRAN and GitHub

- B. D. Wundervald, *Chorrrds: Music chords extraction*, R package version 0.1.9.1, 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`.
- P. E. UFPR, *Biblioteca de dados para aprendizado de estatística*, R package version 0.1-1.462, 2016. [Online]. Available: `http://www.leg.ufpr.br/~walmes/pacotes/labestData-manual.pdf`.

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### ⚙ 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/`.

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# TEACHING EXPERIENCE

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|---|---|
| 2019 | Music Data Analysis in R, Shortcourse, *IV International Seminar on Statistics with R*, May 2019. |
| 2019 | Building R packages Workshop, *University College Dublin*, April 2019. |
| 2019 | Deep Learning for Statisticians, Instructor, *XVI School of Regression Models*, March 2019. |
| 2019 | Statistical Machine Learning, Tutoring, *Maynooth University*, 1st Semester. |
| 2018 | Linear Models 2, Tutoring, *Maynooth University*, 2nd Semester. |
| 2018-2019 | R-Ladies Meetup Presentations *Curitiba and São Paulo, Brazil*. |
| 2017 | R Markdown, Taught Short Course, *Federal University of Paraná* Curitiba, Brazil, 20h, September 2017. |

# ORAL COMMUNICATIONS

2019    Probabilistic Graphical Models in `R` and `python`
        *IV International Seminar on Statistics with R,*
        Niterói, Brazil, May 2019.

2019    Regularization Methods in Random Forests
        *39th Conference on Applied Statistics in Ireland ,*
        Dundalk, Ireland, May 2019.

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.

# SEMINARS AND MEETUPS

2019    Tree based models in `R`, *R-Ladies Dublin Meetup,*
        Dublin, Ireland, June 2019.

2019    An Introduction to Bayesian Regression Trees
        *Federal University of Paraná,* Curitiba, Brazil, March 2019.

2019    `googleAnalyticsR` & purrr, *R-Ladies São Paulo Meetup,*
        São Paulo, Brazil, March 2019.

2018    The steps of a Kaggle project, *Hamilton Institute*
        Maynooth, Ireland, November 2018.

2018    Git & GitHub tutorial, *Hamilton Institute*
        Maynooth, Ireland, October 2018.

2018    Basic `R` + `dplyr`, *R-Ladies São Paulo Meetup,*
        São Paulo, Brazil, August 2018.

2018    Basic `R` + `dplyr`, *R-Ladies Curitiba Meetup,*
        Curitiba, Brazil, June 2018.

# POSTER PRESENTATIONS

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.

# SHORT COURSES ATTENDED

2019    Machine Learning Summer School, *University College London, 40h*
2019    High-dimensional Statistics, *Durham University, 12h*
2019    Computer Intensive Statistics , *Durham University, 12h*
2019    Shiny, *IV International Seminar on Statistics with R, 3h*
2019    Statistics in the Cloud, *Dundalk, 3h*
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.*
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.*

# GRANTS

2019    *Women in Data Science,*
        Travel & Conference Scholarship,
        Zurich, Switzerland.

2019    *Rstudio Conference,*
        Travel & Conference Scholarship,
        Austin, Texas.

2017    Scientific Initiation, supervised by
        Prof. PhD Wagner Hugo Bonat,
        *Construction of Multivariate*
        *Probability Distributions.*
        Duration: 12 months

2016    Project of Tutorial Extension
        in Statistics, supervised by
        Prof. Dr. Walmes Marques Zeviani,
        *Non-Linear Models Catalog.*
        Duration: 10 months

2015    Laboratory of Applied Statistics,
        supervised by Prof. Dr. Cesar Augusto
        Taconeli and Prof. Dr. Fernanda
        Buhrer Rizzato.
        Duration: 6 months

2014    Teaching Initiation Program, supervised
        by Prof. Dr. Jomar Camarinha Filho
        Course: Basic Statisics.
        Duration: 4 months

2014    Teaching Initiation Program, supervised
        by Prof. Dr. Jomar Camarinha Filho
        Course: Statistics II.
        Duration: 4 months

# REFEREES

**Prof. PhD Wagner Hugo Bonat**

@ Department of Statistics

✉ wbonat@ufpr.br

Federal University of Paraná,
+55 41 3361-3254,

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**Prof. PhD Paulo Justiniano Ribeiro Júnior**

@ Department of Statistics

✉ paulojus@ufpr.br

Federal University of Paraná,
+55 41 3361-3254,

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**Prof. Dr. Victor Fossaluza**

@ Institute of Mathematics and Statistics

✉ victorf@ime.usp.br

University of São Paulo
+55 11 3091-6187