

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.

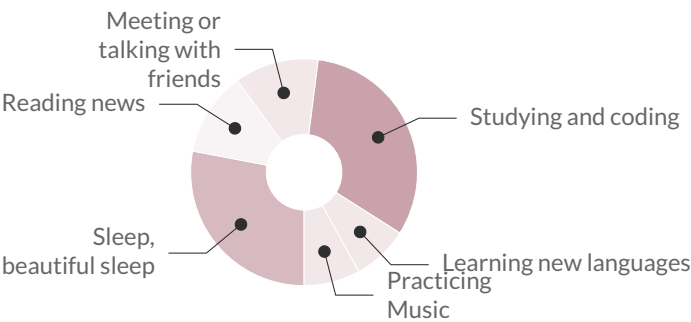
Statistics Intern

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/>

STRENGTHS

Bayesian Methods Multivariate
Statistics Variational Inference

R tidyverse Shiny Python
JAGS & Stan Git GitHub HTML
CSS L^AT_EX

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.

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>Dublin City University</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

- 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

- 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

- 2018 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

Prof. PhD Wagner Hugo Bonat

@ Department of Statistics

✉ wbonat@ufpr.br

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

Prof. PhD Paulo Justiniano Ribeiro Júnior

@ Department of Statistics

✉ paulojus@ufpr.br

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

Prof. Dr. Victor Fossaluzza

@ Institute of Mathematics and Statistics

✉ victorf@ime.usp.br

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.