BRUNA WUNDERVALD

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🐦 @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 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

Graduate Teaching Assistant

Maynooth University

📅 2019   📍 Maynooth, Ireland

- Lab conducting, student support and paper grading for MSc students.

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 data of the people living in Pinhais City.

Statistics Intern

Bradesco Bank

📅 2016-2017   📍 Curitiba, Paraná, Brazil

- Credit risk modelling with logistic regression.

STRENGTHS

| Bayesian Methods | Multivariate Statistics | Variational Inference |

| MIR | Machine Learning | NLP |

| R | tidyverse | python | julia | c++ | Shiny | JAGS & Stan |

| git | GitHub | HTML | CSS | LaTeX |

EDUCATION

Ph.D. candidate in Statistics

Maynooth University

📅 Sept 2018 – *

Thesis theme: Extensions to Bayesian Tree-Based Models

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, Curitiba and Dublin, https://rladies.org/

🎵 **R-Music Blog**
https://r-music.rbind.io/

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

LANGUAGES

English ●●●●●

Portuguese ●●●●●

French ●●●●○

Spanish ●●●●○

Italian ●●●●○

Dutch ●●○○○

Russian ●○○○○

REVIEWER

- **rOpenSci** - R Packages Reviewer. 2018 - Current.
- **TEMA: Trends in Applied and Computational Mathematics** - Journal Articles Reviewer. 2019 - Current.
- **ISMIR 2020** - Conference Reviewer. 2020 - Current.

PUBLICATIONS

📕 Books

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

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📄 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.

- **vagalumer: Access to the 'vagalume' api** - Author, [Online] Available: https://CRAN.R-project.org/package=vagalumeR
- **chorrrds: Music chords extraction** - Author, [Online] Available: https://CRAN.R-project.org/package=chorrrds
- **broom: Convert Statistical Analysis Objects into Tidy Tibbles** - Contributor, [Online] Available: https://github.com/tidymodels/broom
- **distributions3: Probability Distributions as S3 Objects** - Contributor, [Online] Available: https://github.com/alexpghayes/distributions3
- **ranger: A Fast Implementation of Random Forests** - Contributor, [Online] Available: https://github.com/imbs-hl/ranger

⠿ 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

2019/2020	Topics in Data Analytics, Tutoring instructor, *Maynooth University*, 2nd Term.
2019/2020	R for Data Analytics, Tutoring instructor, *Maynooth University*, 1st Term.
2019/2020	Statistical Methods for Data Science, Tutoring instructor, *Maynooth University*, 1st Term.
2019	Music Data Analysis in R, Shortcourse instructor, *IV International Seminar on Statistics with R*, May 2019.
2019	Building R packages Workshop, Workshop teaching assistant, *University College Dublin*, April 2019.
2019	Deep Learning for Statisticians, Shortcourse instructor, *XVI School of Regression Models*, March 2019.
2019	Statistical Machine Learning, Tutoring instructor, *Maynooth University*, 1st Term.
2018	Linear Models 2, Tutoring instructor, *Maynooth University*, 2nd Term.
2017	R Markdown, Shortcourse instructor, *Federal University of Paraná* September 2017.

ACADEMIC RELATED WORK

2019/2020	Students Seminar Series, Chair & Organizer, Hamilton Institute, *Maynooth University*
2019	satRdays São Paulo, Scientific Committee & Organizer, São Paulo, São Paulo, Brazil.
2019	*PyCon Ireland 2019*, Session Chair, Dublin, Ireland.

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

2020   I'm a Data Scientist, Git me out of here!, *R-Ladies Dublin Meetup*,
Dublin, Ireland, February 2020.

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   Regularization Methods in
Random Forests,
Machine Learning Summer School,
London, England, July 2019.

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	Design of Experiments and Studies, *Oxford University, 12h*	
2019	Flexible Regression, *Oxford University, 12h*	
2019	Model assessment and selection, *Cambridge University, 3h*	
2019	A Dive into Stan's `C++` Model Concept, *Cambridge University, 3h*	
2019	Hierarchical Modeling with `Stan`, *Cambridge University, 6h*	
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.*	

TRAVEL & DIVERSITY GRANTS

2019	*ISMIR 2019,* Conference Scholarship, Delft, The Netherlands.	
2019	*PyCon Ireland 2019,* Conference Scholarship, Dublin, Ireland.	
2019	*StanCon 2019,* Conference Scholarship, Cambridge, England.	
2019	*Women in Data Science,* Travel & Conference Scholarship, Zurich, Switzerland.	
2019	*Rstudio Conference,* Travel & Conference Scholarship, Austin, Texas.	

GRANTS

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 Andrew Parnell

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