

Guilherme Borba Neumann

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EDUCATION

Doctorate in Genetics

Humboldt University of Berlin - Expected August 2022

Project Title: Development of a customized SNP-chip for the endangered German Black Pied cattle breed

Master in Informatics

Pontifical Catholic University of Rio de Janeiro - July 2019, Cum. GPA: 9.5 / 10.0

Bachelor in Biological Sciences

Pontifical Catholic University of Rio de Janeiro - July 2017, Cum. GPA: 9.1 / 10.0

Technical course in Telecommunications

Federal Center for Technological Education of Rio de Janeiro - December 2012, 1548 hours

EXTENSION

Gene Mapping and Genomic Prediction

Aarhus University, 2020 Summer School, 140 hours - Aarhus, Denmark

Genome Assembly

National Laboratory for Scientific Computing, 2018 Summer School, 30 hours - Petrópolis, RJ, Brazil

Bioinformatics I

UC San Diego, Finding Hidden Messages in DNA, 2017, 50 hours via Coursera

Library Preparation and Data Analysis on the Ion Torrent

Thermo Fisher Scientific, Training Program, 2017, 46 hours - Rio de Janeiro, Brazil

SKILLS

Programming

Python • C • R • Java • PHP

Languages

Fluent: Portuguese • English Intermediate: Spanish • German

AWARDS

2019 Scholarship to participate in the 2nd Europe-FAANG Workshop on Functional Annotation of Animal Genomes - Prague, Czechia Republic

2016 Academic Merit Certificate, PUC-Rio

2015 Honorable Mention Rio 450 Anos Contest, PUC-Rio

2012 Gold Medal, Brazilian Physics Olympiad

2011 Award of Recognition, Petrópolis City Council

MEMBERSHIPS

DGfZ (DEutsche Gesellschaft für Züchtungskunde) • EAAP (European Federation for Animal Science)

EXPERIENCE

Developer | Projeto Portinari (December 2018 – July 2019) **Rio de Janeiro, Brazil**

- Continued development in PHP and management of relational databases

Master Student, Graduate Teaching Assistant | PUC-RIO (August 2017 – July 2019), **Rio de Janeiro, Brazil**

- Assisting in Python courses
- Researcher at BioBD Lab - Genome Assembly Evaluation Project

Researcher Intern | Molecular Virology Laboratory – UFRJ (Sep 2016 – July 2017) **Rio de Janeiro, Brazil**

- Researcher studying primary resistance of Brazilian HIV+ patients

Undergraduate Teaching Assistant, Researcher Intern | PUC-RIO (Feb 2014 – July 2017) **Rio de Janeiro, Brazil**

- Assisting in C courses, March 2017 – July 2017, March 2016 – July 2016
- Intern in the Sugarcane Genome Project (BioBD Lab), March 2016 - Aug 2016
- Assisting in the Ecology of Communities and Ecosystems course, March 2015 – July 2015
- Technical level B intern by CNPQ in the project Bamboo for a Sustainable Engineering: Study of silver nanoparticles as fungi inhibitors on bamboo, December 2014 - December 2015

Researcher Intern | CEFET-RJ (March 2013 – Dec 2013) - **Petrópolis, RJ, Brazil**

- Zigbee Networks Research Project

Trainee | Orange Business Services (Feb 2012 – March 2013) - **Petrópolis, RJ, Brazil**

- Trainee in Computer Networks and Telecommunications

VOLUNTEER WORK

Biology Teacher, Community pre-university entrance exam, PUC-Rio, February 2014 – December 2015

Volunteer, International Conference on Very Large Data Bases (VLDB 2018), Rio de Janeiro, Brazil, August 27-31. 2018.

Volunteer, IEEE World Congress on Computational Intelligence (WCCI 2018), Rio de Janeiro, Brazil, July 8-13. 2018.

PUBLICATIONS

Peer-reviewed

- S. Meier, D. Arends, P. Korkuc, **G. B. Neumann**, and G. A. Brockmann, "A genome-wide association study for clinical mastitis in the dual-purpose German Black Pied cattle breed," *J. Dairy Sci.*, vol. 103, no. 11, pp. 10289–10298, Nov. 2020, doi: 10.3168/jds.2020-18209.
- **G. B. Neumann**, E. M. de Armas, F. A. Baiao, R. L. Milidiu, and S. Lifschitz, "A domain framework approach for quality feature analysis of genome assemblies," *Lecture Notes in Computer Science*, 2020, vol. 11347 LNBI, pp. 116–122, doi: 10.1007/978-3-030-46417-2_11.
- **G. B. Neumann**, V. P. d. Almeida and M. Endler, "Smart Forests: fire detection service," *2018 IEEE Symposium on Computers and Communications (ISCC)*, Natal, Brazil, 2018, pp. 1276-1279, doi: 10.1109/ISCC.2018.8538719.
- V. Pinheiro, **G. B. Neumann**, M. Endler and F. Silva, "Deklaer: An Ontology-Driven Framework for Generating IoT Applications using ContextNet," *2018 IEEE Symposium on Computers and Communications (ISCC)*, Natal, Brazil, 2018, pp. 608-614, doi: 10.1109/ISCC.2018.8538718.

Other

- **G. B. Neumann**, P. Korkuc, D. Arends, G. A. Brockmann. "Functional Annotation of Gene Variants in Endangered Breeds: A Study in German Black Pied Cattle" [Poster]. *2nd FAANG-Europe Workshop on Functional Annotation of Animal Genomes*, Prague, Czechia Republic, 2020.
- **G. B. Neumann**, B. P. de Albuquerque. "Genetically Modified Organisms in Pope Francis' Conception of Integral Ecology". *Dign. Re-Vista*, vol. 3, no. 5, pp.19–34, 2018.