Nathan Schneider Gavenski

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Education

King's College London (KCL), United Kingdom
  Ph.D., Computer Science, 2022 to 2026 (expec.)
Pontifícia Universidade Católica do Rio Grande do Sul (PUCRS), Brazil
  M.S., Computer Science, 2021
  B.S., Information Systems, 2018

Academic Experience

Data Science: Deep Learning II   2021 - 2024
  Visiting Lecturer at PUCRS Online, Porto Alegre, Brazil

Teaching Experience

Elementary Logic With Applications   Spring 2024-2023
  Teaching Assistant for Dr. Odinaldo Rodrigues and Dr. Christopher Hampson, at King's College London
Logic and Knowledge Representation   Spring 2023-2024
  Teaching Assistant for Dr. Odinaldo Rodrigues and Dr. Christopher Hampson, at King's College London
Optimisation Methods   Summer 2022
  Teaching Assistant for Prof. Tomasz Radzik and Dr. Yali Du, at King's College London
Artificial Intelligence Fundamentals   Summer 2020
  Teaching Assistant for Prof. Rodrigo Barros and Prof. Felipe Meneguzzi, at PUCRS
Applied Artificial Intelligence   Summer 2020
  Teaching Assistant for Prof. Rodrigo Barros and Prof. Felipe Meneguzzi, at PUCRS
Business Intelligence   Spring 2020
  Teaching Assistant for Prof. Rodrigo Barros, at PUCRS

Distinction

Awarded for Inclusion Research Award, Google Research 2022

Graduated with summa cum laude, MSc (PUCRS), 2021

Academic Service

Journal Reviewer

IEEE Transactions on Neural Networks and Learning Systems (TNNLS)

Ad Hoc Reviewer

International Conference on Autonomous Agents and Multi-Agent Systems (AAMAS) 2024

The International Joint Conference on Neural Networks (IJCNN) 2023 - 2021

IEEE/CVF Winter Conference on Applications of Computer Vision (WACV) 2023 - 2022

The British Machine Vision Conference (BMVC) 2024 - 2022

International Joint Conference On Artificial Intelligence (IJCAI) 2024 - 2024

IEEE Conference on Artificial Intelligence (IEEE CAI) 2023

Publication

Dissertation

1. **Self-supervised Imitation Learning from Observation**. Gavenski, N. and Barros, R. C.. Pontifícia Universidade Católica do Rio Grande do Sul (PUCRS). URL: `http://tede2.pucrs.br/tede2/handle/tede/9778`

Conference Articles

2. **Explorative imitation learning: A path signature approach for continuous environments** Nathan Gavenski, Juarez Monteiro, Felipe Meneguzzi, Michael Luck, & Odinaldo Rodrigues. In: Proceedings of 27th European Conference on Artificial Intelligence, ECAI 2024.

3. **Imitation Learning Datasets: A Toolkit For Creating Datasets, Training Agents and Benchmarking**. Nathan Gavenski, Michael Luck & Odinaldo Rodrigues. In: Proceedings of 23rd International Conference on Autonomous Agents and Multi-Agent Systems, AAMAS 2024.

4. **Self-Supervised Adversarial Imitation Learning**. Juarez Monteiro, Nathan Gavenski, Felipe Meneguzzi, & Rodrigo C. Barros. In: Proceedings of the 2023 International Joint Conference on Neural Networks, IJCNN 2023, pp. 1-8, IEEE Computer Society. DOI: `https://doi.org/10.1109/IJCNN54540.2023.10191197`

5. **How Resilient Are Imitation Learning Methods to Sub-optimal Experts?**. Nathan Gavenski, Juarez Monteiro, Adilson Medronha, & Rodrigo C. Barros. In: Proceedings of 11th Brazilian Conference, BRACIS 2022, pp. 449-463, Springer International Publishing. DOI: `https://doi.org/10.1007/978-3-031-21689-3_32`

6. **Efficient counterfactual debiasing for visual question answering**. Camila Kolling, Martin More, Nathan Gavenski, Eduardo Pooch, Otávio Parraga, & Rodrigo C. Barros. In: Proceedings of the IEEE/CVF Winter Conference on Applications of Computer Vision, WACV 2022, pp. 3001-3010, IEEE Computer Society. DOI: `https://doi.org/10.1109/WACV51458.2022.00263`

7. **Object-based goal recognition using real-world data**. Rger Granada, Juarez Monteiro, Nathan Gavenski, & Felipe Meneguzzi. In: Proceedings of the 19th Mexican International Conference on Artificial Intelligence, MICAI 2020, pp. 325-337, Springer International Publishing. DOI: `https://doi.org/10.1007/978-3-030-60884-2_24`

8. **Imitating Unknown Policies via Exploration**. Nathan Gavenski, Juarez Monteiro, Roger Granada, Felipe Meneguzzi, & Rodrigo C. Barros. In: Proceedings of the 2020 British Machine Vision Virtual Conference, BMVC 2020, pp. 1–8, BMVA. URL: `https://www.bmvc2020-conference.com/assets/papers/0774.pdf`

9. **Augmented Behavioral Cloning from Observation**. Juarez Monteiro, Nathan Gavenski, Roger Granada, Felipe Meneguzzi, & Rodrigo C. Barros. In: Proceedings of the 2020 International Conference on Neural Networks, IJCNN 2020, pp. 1–8. IEEE Computer Society. DOI: `https://doi.org/10.1109/IJCNN48605.2020.9207672`

10. **Attention-based 3D Object Reconstruction from a Single Image**. Andrey Salvi, Nathan Gavenski, Eeduardo Pooch, Felipe Tasoniero & Rodrigo C. Barros. In: Proceedings of the 2020 International Joint Conference on Neural Networks, IJCNN 2020, pp. 1-8. IEEE Computer Society. DOI: `https://doi.org/10.1109/IJCNN48605.2020.9206776`

Journal Articles

11. **Imitation Learning: A Survey of Learning Methods, Environments and Metrics**. Nathan Gavenski, Felipe Meneguzzi, Odinaldo Rodrigues, & Michel Luck Under review 2024 URL: `https://arxiv.org/abs/2404.19456`

12. **Debiasing methods for fairer neural models in vision and language research: A survey**. Otávio Parraga, Martin More, Christian Oliveira, Nathan Gavenski, Lucas Kupssinskü, Adilson Medronha, Luis Moura Gabriel Simões, & Rodrigo C. Barros ACM Computing Surveys, Accepted on December 2023. DOI: `https://doi.org/10.1145/3637549`

13. **Artificial intelligence to predict the risk of mechanical ventilation in cases of severe COVID-19**. Mariana F. de Godoy, José M. Chatkin, Rosana Rodrigues, Gabriele C. Forte, Edson Marchiori, Nathan Gavenski, Rodrigo C. Barros, & Bruno Hochhegger. Radiologia Brasileira, RB 2022, volume 56, pp. 81-85. DOI: `https://doi.org/10.1590/0100-3984.2022.0049`

Industrial Experience

Teia Labs – Web Developer, Porto Alegre, Brazil	2022 - 2021
ADP Brazil Labs – Software Developer II, Porto Alegre, Brazil	2019 - 2018
IBM – QA Test Analyst, Porto Alegre, Brazil	2018 - 2014
Renner – Intern, Porto Alegre, Brazil	2013 - 2013
Dell – Intern,, Porto Alegre, Brazil	2013 - 2012

Language

Native Portuguese (Brazilian)

Advanced English (Academic IELTS Overall Score: 7.5)

Intermediate German (Deutsches Sprachdiplom Score: A2)

Elementary Spanish