

Camila Kolling dos Reis

✉ camilakolling@outlook.com | 🏠 camilakolling.github.io | 🌐 camilakolling | 🌐 camilakollingr | 🐦 camilakollingr

EDUCATION

Max Planck Institute for Software Systems (MPI-SWS) & Saarland University (UdS) PhD in Computer Science	Germany 2023 - Present
<ul style="list-style-type: none">Advisor: Prof. Krishna Gummadi (MPI-SWS).	
Pontificia Universidade Católica do Rio Grande do Sul (PUCRS) MS in Computer Science	Brazil 2020 - 2022
<ul style="list-style-type: none">GPA: 9.95/10.Final research thesis: Mitigating Bias in Facial Analysis Systems by Incorporating Label Diversity. Published at SIBGRAPI 2023.Advisors: Prof. Soraia Raupp Musse (PUCRS) and Prof. Adriano Veloso (UFMG).	
Pontificia Universidade Católica do Rio Grande do Sul (PUCRS) BS in Computer Engineer	Brazil 2015 - 2020
<ul style="list-style-type: none">GPA: 9.45/10. Best student award of all engineering courses of the university.Final project: Component Analysis for Visual Question Answering Architectures. Best final project award of the computer engineering class. Published at IJCNN 2020.	

EXPERIENCE

Max Planck Institute for Software Systems (MPI-SWS) Research Assistant	Dec 2022 - Present Saarbrücken, Germany
<ul style="list-style-type: none">In the current project, I am advised by Prof. Krishna Gummadi and Prof. Mariya Toneva. My main focus is investigating representations of deep learning models.	
Max Planck Institute for Software Systems (MPI-SWS) Research Internship	Aug 2022 - Nov 2022 Saarbrücken, Germany
<ul style="list-style-type: none">I investigated techniques for measuring representation similarity between neural networks. I was advised by Prof. Krishna Gummadi and Prof. Mariya Toneva.	
Max Planck Institute for Software Systems (MPI-SWS) Research Internship	Nov 2021 - Feb 2022 Saarbrücken, Germany
<ul style="list-style-type: none">I worked with solutions to adversarial attacks, and evaluation of human perception in the deep learning domain. I was advised by Prof. Krishna Gummadi.	
Google Brain Research Internship	Aug 2021 - Nov 2021 Warsaw, Poland
<ul style="list-style-type: none">I worked on problems related to computer vision. Specifically, I worked with Transformer-based architectures for improving the task of visual question answering. My hosts were Neil Houlsby, Xiaohua Zhai, and Matthias Minderer.	
Kunumi Research Engineer / Machine Learning Engineer	Jan 2020 - Aug 2021 Porto Alegre, Brazil
<ul style="list-style-type: none">My research focused on applying artificial intelligence techniques for social good. My goal was to build fair, explainable and bias-resilient neural networks. I also worked on the development of a process-based data platform that behaves like an automatic prediction engine.	
Kunumi Data Science Internship	Jan 2018 - Jan 2020 Porto Alegre, Brazil
<ul style="list-style-type: none">I implemented techniques to enhance the interpretability of deep neural networks in projects related to intensive care units and worked on the development and improvement of a natural language processing model for a conversational assistant.	
Pontificia Universidade Católica do Rio Grande do Sul (PUCRS) Research Internship	Jan 2017 - Jan 2018 Porto Alegre, Brazil
<ul style="list-style-type: none">I developed an AI using Symbolic Behavior Recognition and Hierarchical Task Network recognizers. We chose to implement it using the MicroRTS game.	
Pontificia Universidade Católica do Rio Grande do Sul (PUCRS) Research Internship	Mar 2016 - Jan 2017 Porto Alegre, Brazil
<ul style="list-style-type: none">I joined a project whose goal was to develop a new assistive robot programming environment that was capable of teaching programming skills for kids and young people with visual impairments.	

SELECTED PUBLICATIONS (FOR COMPLETE LIST PLEASE FOLLOW THIS LINK)

Do Invariances in Deep Neural Networks Align with Human Perception? Vedant Nanda, Ayan Majumdar, Camila Kolling , John P Dickerson, Krishna P Gummadi, Bradley C Love, Adrian Weller	AAAI 2023
Measuring Representational Robustness of Neural Networks Through Shared Invariances Vedant Nanda, Till Speicher, Camila Kolling , John P. Dickerson, Krishna P. Gummadi, Adrian Weller	ICML (Long Oral) 2022
Efficient Counterfactual Debiasing for Visual Question Answering Camila Kolling , Martin More, Nathan Gavenski, Eduardo Pooch, Otávio Parraga, Rodrigo C Barros	WACV 2022
Component Analysis for Visual Question Answering Camila Kolling , Jônatas Wehrmann, Rodrigo C Barros	IJCNN 2020
Adaptive Cross-modal Embeddings for Image-Text Alignment Jônatas Wehrmann, Camila Kolling , Rodrigo C Barros	AAAI 2020

HONORS & AWARDS

Engineer of the Year Award by Rio Grande do Sul Engineering Society (SERGS)	2019
Student Highlight Award by the Brazilian Computing Society (SBC)	2019
Best Grades of All Engineering Courses Award by PUCRS	2019
Best Final Project of the Computer Engineering Class by PUCRS	2019

TECHNICAL SKILLS

Programming languages: Python (advanced) , C (basic) , Java (basic)

ML/AI: Pytorch (advanced) , Numpy (advanced) , Pandas (advanced) , Tensorflow (basic) , JAX (basic)

LANGUAGES

Portuguese (native)

English (fluent)

German (basic)

SERVICE

Reviewer	ICML 2022
	EAAMO 2023
	NeurIPS 2023
	ECIR 2024
	ICML 2024

EXTRACURRICULAR ACTIVITIES

AI Alignment Course AI Safety Fundamentals	2024 - Present Online
German Proficiency Course Level: A2.1	2023 - Present Online
The Cornell, Maryland, Max Planck School Pre-doctoral Research School	2022 Saarbrücken, Germany
The Cornell, Maryland, Max Planck School Pre-doctoral Research School	2020 Virtual
KHIPU Latin American Meeting in Artificial Intelligence	2019 Montevideo, Uruguay
Presented a Talk: Deep Learning for Computer Vision The Developer's Conference POA	2018 Porto Alegre, Brazil
Python for Data Science and Machine Learning Bootcamp Offered by Udemy in partnership with Pierian Data International	2017 Virtual
Machine Learning Course Offered by Stanford University in partnership with Coursera	2017 Virtual
First Certificate in English (FCE) University of Cambridge	2013 Porto Alegre, Brazil
Student Exchange to Bedford (England) English Language Course at Embassy Summer Bedford (Polhill)	Jun, 2013 - Aug, 2013 Bedford, England
Student Exchange to Toronto (Canada) English Language Study at ILSC Education Group	Jan, 2013 - Feb, 2013 Toronto, Canada
Basic German Certificate (A2) Pastor Dohms School	2012 Porto Alegre, Brazil
Basic German Certificate (A1) Pastor Dohms School	2011 Porto Alegre, Brazil
