Robin Tibor Schirrmeister

Curriculum Vitae

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Open Source Projects

Since 2017 **Braindecode**, A deep learning toolbox to decode raw time-domain EEG, `robintibor.github.io/braindecode/`.

2015 **Python Mindwave Mobile**, Python library for the Neurosky Mindwave Mobile EEG Headset, `github.com/robintibor/python-mindwave-mobile`.

First Author Publications

2018 **Training Generative Reversible Networks**, *Robin Tibor Schirrmeister et. al*, Theoretical Foundations and Applications of Deep Generative Models Workshop at ICML 2018.
Showed effectiveness of never-before applied training strategies for generative reversible networks, generating realistic human faces and handwritten digits.

2017 **Deep learning with convolutional neural networks for decoding and visualization of EEG pathology**, *Robin Tibor Schirrmeister et. al*, IEEE Signal Processing in Medicine and Biology Symposium.
Reached state-of-the-art performance for pathology diagnosis from electroencephalography (EEG).

2017 **Deep learning with convolutional neural networks for EEG decoding and visualization**, *Robin Tibor Schirrmeister et. al*, Human Brain Mapping.
First study showing deep convolutional networks can reach as good performance as established feature-based methods on traditional EEG decoding tasks. Received national media coverage.

Since 2015 **Further publications**, *See scholar profile at `goo.gl/793pBX`.*

Research Experiences

Since September 2014 **Research Assistant and PhD Student**, *University Freiburg, Translational Neurotechnology Lab under Tonio Ball and Machine Learning Lab under Frank Hutter.*
Investigating the use of deep learning on brain signals (EEG), including model interpretability. Investigating deep generative models. 3 first-author and 7 co-author publications so far.

2010-2015 **Student Research Assistant**, *University Freiburg, Chair of Algorithms and Datastructures under Hannah Bast.*
Performance evaluation of a search engine, creation of route planners on desktop and mobile devices, machine learning in semantic search and route planning tasks. 2 co-author publications.

2012-2014 **Student**, *University Freiburg, Chair of Machine Learning under Martin Riedmiller.*
Creating an inexpensive brain computer interface for public demonstrations of the university.

Other Practical Experiences

2012-2014 **Software Developer**, *Rizzoma.*
Participating in the development of the Google-Wave-inspired collaboration tool rizzoma.com

2009 - 2010 **Teaching Assistant**, *University Freiburg*, Freiburg.
Support of students with programming in C++ and Scheme

Education

2015 **Master Thesis about Deep Learning for Motor Imagery Classification from EEG brain signals.**, *University Freiburg*, Freiburg.

2012 - 2015 **Student of Computer Science - Master**, *University Freiburg*, Freiburg, Graduated with Grade 1.0.

2008 - 2012 **Student of Computer Science - Bachelor**, *University Freiburg*, Freiburg, Graduated with Grade 1.1.

2007 - 2008 **Student of Natural Sciences in the Information Society**, *TU Berlin*, Berlin.

June 2006 **Abitur**, *Hermann-Hesse-Oberschule*, Berlin.

Programming Language Skills

Advanced **Python**, *Used daily at the moment, used for a large number of smaller to midsized research projects.*

Intermediate **MATLAB, Java, C++, Javascript/Coffeescript**, *used extensively for research and non-research projects in the past.*

Basic **C#, Scheme, SQL, PHP**, *used in a small number of projects.*

Language Skills

German **Native Speaker**.

English **Fluent in speaking and writing**, *mainly learned in 5 years of bilingual education.*

Spanish **Beginner level**, *Level A2, practiced during a stay in central america.*

Volunteer work

May 2012 - July 2015 **Volunteer**, *Fluechtlingsheim St. Christoph*, Freiburg.
Supporting children of asylum-seeking families with their schoolwork

September 2006 **Volunteer**, *La Tortuga Feliz*, Costa Rica.
Breeding and protection of sea turtles together with the local population

Freiburg, October 24, 2018