Michael Deistler

Curriculum Vitae

Education

since 2017 **Elite Master of Science in Neuroengineering**, *Technical University of Munich*, *German Grade – 1.2, American GPA – 3.8*.

2017 **Erasmus Semester**, *KTH Royal Institute of Technology*, Stockholm, *German Grade – 1.3, American GPA – 3.7*.

2013–2017 **Bachelor of Science in Electrical and Information Engineering**, *Technical University of Munich*, *German Grade – 1.2, American GPA – 3.8*, Degree with Honours.

2013 **Abitur / Highschool Degree**, *Gymnasium Landau a. d. Isar*, *German Grade – 1.1, American GPA – 3.9*.

Experience

2018 **Nine Week Research Project**, Max-Planck-Institute for Brain Research, Group for Computation in Neural Circuits, Frankfurt, Supervisors: PhD. Julijana Gjorgjieva, PhD. Marina Wosniack.
- A Spiking Neural Network for modeling locomotion in Drosophila Melanogaster larvae

2018 **Six Week Research Project**, University of Edinburgh, Chair for Computational Neuroscience, Edinburgh, Supervisors: PhD. Matthias H. Hennig, Martino Sorbaro.
- Overcoming catastrophic forgetting, see section *Publication*

2017-2018 **Working Student**, Brainlab AG, Munich, Platforms Department.
- Implementation of a Script for automatic Bootcycle Tests
- Electrical Circuit Design

2014-2018 **Teaching Assistant**, Chairs of 'Human-Machine-Communication', 'Signal Processing Methods' and 'Integrated Systems', Munich.

2016 **Six Month Internship**, BMW, Center for Autonomous Driving, Munich.
- Development of an Algorithm for movement compensation
- OpenCL Parallelization of a Particle Filter for environment capturing and integration of the software components in ROS

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2015 **Eleven Week Internship**, German Aerospace Center, Center for Communication and Navigation, Munich.
- Work on Data Visualization and Signal Propagation

2013-2014 **Participation in the AdvEIsor Program**, Technical University of Munich. Soft-Skill program offered by the TU Munich. Additionally, students gained hands-on experience by building a rotor display in a group of ten people.

Publication

Title *Local learning rules to attenuate forgetting in neural networks*

Supervisor PhD Matthias Hennig, M.Sc. Martino Sorbaro, PhD Michael Rule

Journal Still in review process

Description This Paper explores the problem of overcoming forgetting in Artificial Neural Networks. While there are attempts to alleviate this problem, none of them provides an explanation for how such algorithms could be implemented in the brain. Here, we use Hopfield networks to derive local and hence biologically plausible learning rules.

Bachelor Thesis

Title *Temporal Interpolation of Grayscale Frames using Event Data from the DAVIS240*

Supervisors Professor Eckehard Steinbach & PhD Christoph Bachhuber

Description Dynamic Vision Sensors are a neuromorphic camera technology recording event data on an almost continuous time-scale. Additional to this data, the DAVIS240 also records traditional frame-based videos. This thesis explored the fusion of this data in order to create super slow-motion videos.

Programming Languages

python **Advanced**, *Course project in Deep Learning; Research Project in Edinburgh.*

Matlab **Advanced**, *Nine-week working experience at DLR; Bachelor Thesis.*

C++ **Intermediate**, *Self studies; Five-month working experience at BMW.*

C **Intermediate**, *University course.*

java **Basic**, *Two-year eduction in highschool.*

Languages

German **Mothertongue**

English **C2 (proficient)**

French **A2 (elementary)**

Swedish **A2 (elementary)**

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