Benjamin Gallusser

Machine Learning Enthusiast

Contact

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Coding skills

👍👍👍 Python
👍👍 C++, C
👍 Java, Matlab, JS
ML: Pytorch, Tensorflow
web: Django, Typo3

Personal info

date of birth
03 Apr 1993

nationalities
CH, GER, USA

languages
native 🇩🇪
fluent 🇬🇧 & 🇪🇸
proficient 🇫🇷
intermediate 🇮🇹

interests
creating & playing music
complex board games
traveling by bicycle
competitive sports

Education

ETH Zürich – M.Sc. Computer Science	2016 – 2019

at the #3 CS department worldwide (THE ranking 2020)
GPA: 5.2 *on a scale from 6 (excellent) to 1 (failure)*
Focus areas: Deep Learning, NLP, Computer Vision
Master's thesis at HHMI Janelia, USA

TU München – B.Sc. Informatics	2012 – 2016

GPA: 1.7 *on a scale from 1 (excellent) to 5 (failure)*
Student exchange (two semesters) at Universidad Austral de Chile

Gymnasium Penzberg – German high school diploma (Abitur)	2011

GPA: 1.0 *on a scale from 1 (excellent) to 6 (failure)*

Selected academic projects

- **Graph Neural Networks** ↗ (Master's thesis, with Jan Funke) for supervoxel agglomeration in a 3d neuron reconstruction pipeline, working with terabytes of microscopy images
- Single-core **high performance implementation** ↗ of Latent Dirichlet Allocation in C (11x speedup compared to the author's C implementation)
- **Generative Adversarial Networks** ↗ for document style transfer, using Machine Learning to apply any existing layout to a PDF document without manual algorithm configuration
- **Deep Learning** ↗ (Bachelor's thesis) for Recognition of Protein Domains from Contact Maps, simplifying a step in a protein structure prediction pipeline

Work experience

Harvard Medical School – Software Engineer and Research Assistant	Apr'20 – today

- developing and implementing Machine Learning/Computer Vision methods for automated segmentation of cell organelles with Tomas Kirchhausen, Institute of Cell Biology

McKinsey & Company – Data Science Consulting Intern	Nov'18 – Feb'19

- developed a scalable algorithm to extract target events for predictive maintenance of medical diagnostic equipment deployed around the globe
- guided a team of client data engineers to optimize an industrial aluminum plant
- overhauled technical material and programming tutorials for a one-week Advanced Analytics capability building program

ETH Zürich – Teaching Assistant for Advanced Machine Learning	Oct'17 – Jul'19

- created and held large tutorial sessions (~100 participants) for the CS Master's courses Natural Language Understanding and Advanced Machine Learning
- supervised student projects in Natural Language Understanding, such as language modeling and story completion

Institute for Machine Learning, ETH Zürich – Research Assistant	Nov'16 – Mar'18

- collaborated on sleep stage classification based on CNN and HMM with accuracy comparable to human experts, published in PLOS Computational Biology ↗
- designed, developed and administered the web service ↗ for performing GPU-accelerated inference on large sleep signals uploaded by various hospital research labs

Datamints GmbH – Back-end developer (internship)	Jul'13 – Oct'13

- developed internal project status presentation software for weekly team meetings
- side project: implemented Chrome add-on to combine online search with searching the company's knowledge base