Kenneth Atz

Curriculum Vitae

I am a Ph.D. student at ETH Zürich and I am strongly interested in the field of machine learning applied to molecular systems in drug sciences, chemistry and biomedicine. I am fascinated about the concept of representation learning in three-dimensional Euclidean space and deep reinforcement learning. During my studies I was able to gain valuable insights into a variety of interdisciplinary academic research groups and I was given the opportunity to complete an internship at Roche. I am critically thinking, open-minded, resilient, and strive to challenge the status quo.

Education

2019 - present **Ph.D. Student**, Deep Learning, Drug Sciences.
Examiner: Prof. Gisbert Schneider. ETH Zürich

2017 - 2019 **Master of Science**, Chemistry, Quantulm Machine Learning. 5.8/6.
Faculty of Science, University of Basel

2014 - 2017 **Bachelor of Science**, Chemistry. 5.3/6.
Faculty of Science, University of Basel

Experience

Sept. 2019 - 2022 **Ph.D. student**, *Supervisor: Prof. Gisbert Schneider*, ETH Zürich.
Development of novel machine learning frameworks, including equivariant neural networks and language models for their application in drug discovery and molecular design. Applying concepts of first principles quantum mechanics to investigate the learning on small and larger molecular systems.

2019 **Research Assistant**, *Supervisor: Prof. Sebastian Hiller*, Biozentrum, University of Basel.
Structural biology of pro-inflammatory cytokines, membrane proteins and chaperones [7 m.]

2018-2019 **Master's student**, *Supervisor: Prof. Anatole von Lilienfeld*, University of Basel.
Development of Kernel-based quantum machine learning methods for the prediction of reaction outcomes. [4 m.]

2017 - 2018 **Internship**, *Supervisor: Dr. Uwe Grether*, Roche Ltd., Basel.
Small molecule research for the indication in neuroscience, ophthalmology and rare diseases. [9 m.]

Programming Skills

Programming Languages: Fluency in Python; Basics in C++, Java, HTML | **Machine/Deep Learning Frameworks:** Fluency in PyTorch, intermediate in Tensorflow | **Databases:** SQL | **Further Software:** Proficiency in Git.

Language Skills

Native in German and fluent in spoken and written in English

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