

Wilhelm Söderkvist Vermelin

Curriculum Vitae

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Summary

Researcher and PhD student in industrial data analytics and machine learning at RISE. I am interested in different applications of deep learning, such as computer vision, time series predictions and reinforcement learning. In my previous research activities, I have applied the above technologies to quality control within additive manufacturing, predictive maintenance of power electronics and visuomotor control in simulated robotics, respectively.

Education

- 2021– **PhD**, *Mälardalen University, Västerås.*
- 2017–2019 **Masters's degree**, *Chalmers University of Technology, Gothenburg, Degree in Engineering Mathematics and Computational Science.*
Master's thesis: Discovering Patterns in Driving Data
- 2013–2016 **Bachelor's degree**, *Karlstad University, Karlstad, Degree in Physics.*
Bachelor's thesis: 3+1 Approach to Cosmological Perturbations

Experience

- 2019– **Researcher**, *Materials and production*, RISE IVF AB, Mölndal.
I am a researcher in data analysis, machine learning and data handling.
- 2019 **Thesis worker**, *Propulsion Software Development*, Volvo Cars AB, Torslanda.
My thesis concerns finding patterns in time series data using various machine learning techniques.
- 2018–2019 **Project student**, *Active Safety*, Volvo Cars AB, Mölndal.
I was involved in a student project discovering patterns in naturalistic driving data.
- 2015–2017 **Teaching assistant**, *Karlstad University, Sundsta Älvkulle gymnasiet*, Karlstad.
Various short term teaching jobs, mainly teaching mathematics and physics.

Technical skills

I have a background in physics and applied mathematics which results in strong problem solving skills. I am proficient Python developer. Most of my Python experience is within data science and machine learning so I am familiar with the usual Python data science/ML tech stack (NumPy, Pandas, Matplotlib, Scikit-learn, PyTorch, to name a few). Recently I have started looking into the Rust programming language as a means of speeding up Python code, and to enhance my skill set with a low level systems programming language.

Languages

Native **Swedish**
Fluent **English**