

CURRICULUM VITAE

Viktor Qvarfordt

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Career objective

Do research and development in artificial intelligence and machine learning, by applying my theoretical knowledge in mathematics and theoretical physics, and my technical experience from previous employments and academic projects.

Summary of skills and qualifications

- High proficiency in learning and applying abstract theoretical knowledge.
Currently finishing my masters in mathematics.
- Experience in designing large software systems with thousands of monthly users.
Lead developer and coordinator in a team of academics and developers.
- Experience with machine learning from academic projects where state of the art algorithms are employed in new settings. Deep learning, actor-critic reinforcement learning.
- Proficient in Python, Javascript (web development, Node.js), Julia, Matlab, Mathematica. Intermediate level C, C++, Java and Haskell.
- Proficient with Linux/Unix environments and version control systems, in particular Git.
- Eager to learn new skills.

Most relevant education

Master's Program in Mathematics – SU & KTH (joint program) *2014 – Active*
Specialization towards analysis, mathematical physics, quantum mechanics, quantum information and quantum computing. Also relevant; cryptography and category theory.

Most relevant employment and experience

Teaching Assistant (Amanuens) – Department of Mathematics, SU *2013 Aug – Active*
Developing and maintaining software for use at one of Sweden's largest online courses.
Teaching mathematics to classes of up to 150 students, and one-on-one tutoring.
Part of a working group focusing on improving education and developing MOOCs.

Independent Research Project – SU & SSE *2016 – Active*
Developing and implementing machine learning algorithms for solving models in macroeconomics in a team of mathematicians, economists and programmers. Working with various deep learning algorithms, in particular actor-critic reinforcement learning.

Researcher, Summer Intern – Ericsson Research, Multimedia Technologies *Summer 2013*
Developing real-time web applications for Ericsson Spaces, heavy use of Node.js and javascript. Through this job I gained experience in working in a professional office-environment and collaborating within a group of professional software engineers.

The following pages contains additional background.

Education

Summer student program, DESY, Hamburg

Summer 2014, 2 months

The summer program at the Deutsches Elektronen-Synchrotron involved specialized lectures in theoretical and experimental physics, in part linked to the accelerators on campus. The program also involved a group project part; I participated in developing software for data acquisition from accelerators.

Bachelor's Program in Physics, Stockholm University

2011 – 2014

I took part in the extended program 'Forskargrenen', involving additional courses and higher study pace. In parallel I took additional courses in mathematics.

Naturvetenskapligt program, Internationella Kunskaps gymnasiet

2008 – 2011

2600 points, grade average: 22.0 (of 22.5). Specialization courses in physics, mathematics, biotechnology and chemistry. The majority of courses were given in English.

Employment and other experience

Substitute Teacher – upper secondary school, Lärarjouren

2012 Sep – 2013 Jun

At various upper secondary schools I held classes in mathematics, physics and the other natural sciences. A class was often assigned to me with short notice, requiring me to be able to quickly prepare a lecture based on the needs of the student group. This job was a great opportunity for improving my skills as a group leader and in communicating to larger group. Part-time employment.

Private Teacher – upper secondary school, Studybuddy

2012 Aug – 2013 Jun

I worked one on one with students to achieve the desired knowledge level and grades. My role was mainly pedagogical but also coaching and helping the student with study techniques and introducing them to higher-level education. My subject areas were mainly mathematics and physics but also the other natural sciences. The work with a particular student often extended over a full semester. Part-time employment.

Student Mentor, Stockholm University

2012 Spring

Mentor for a student with neuropsychiatric disability, Asperger syndrome. I worked regularly with the student, focusing on study techniques, setting up concrete goals and planning for the workload and giving structure to the studies in general. Part-time during one semester.

Programming and software development

A collection of some of my open projects can be found at github.com/ViktorQvarfordt.

Through previous employments, academic projects and hobby projects I have gained experience in designing large software systems, machine learning, database management, data analysis, numerical analysis and full-stack web development.

Other education and involvement

Participation in organizations at the department of physics (Fysikum), SU *2013 – 2014*

- Committee member, Fysikums Ämnesråd — FÄR
- Committee member, Grundutbildningskommittén — GUK
- Committee member, Fysikernas Ämnesråd — Quanta
- Student representative, the board of Fysikum and other organizations at Fysikum

Seminar: Teaching mathematics, Stockholm University *2013 Aug 26, 28*

Seminar: Leadership, Lärarjouren *2012 Sep*

Seminar: Student mentor/tutor, Stockholm University *2012 Mar*

Languages

Swedish Native

English Fluent

Russian Intermediate spoken, basic written