Stefan Björnander| CV

Updated 2020-11-20

# SUMMARY

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|  | I have in total 35 years’ experience of programming. However, for the last few years, I have worked schoolteacher in mathematics.  I am a skilled and experienced programmer with a Master of Engineering in Computer Science and a licentiate in Software Engineering as a solid theoretical and practical foundation. I have written four books about programming (the latest three in English) and I am currently working on my fifth book.  Compiler construction is my foremost interests. I have given a lecture at the Faculty Club at Umeå University with the title “Applied Graph Theory in Compiler Construction”, and I have during my spare hours developed an optimized C compiler in C# and Java, that generates assembly code for 64-bit Linux and executable code in the 16-bit .com format for Windows. |

# SKILLS

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| Area of expertise | I started out in my youth by the classic languages: Basic, Pascal, Ada, Fortran, and C.  Early in my education I become interested in functional programming: ML is my favorite functional language. Recently, I have looked into Erlang. I am also interested in logical programming in Prolog.  Then the object-oriented languages become popular. I have experience from Pascal and learned Delphi. Then I continued to learn Eiffel, Smalltalk, C++, Objective-C, Java, and C#.  In recent years I have worked with the script languages PHP, JavaScript, Perl, and Python, and tools for fullstack development such as Laravel, Angular, React, Vui.  Win32 API, Microsoft Foundation Classes (MFC), Windows Forms, Qt, and Windows Presentation Foundation (WPF).  I have studied compiler construction in several languages and worked with tools such as tools such as Lex and Yacc for C, CUP and JLex for Java, GPPG and GPLEX for C#, and ML-Yacc and ML-Lex for ML.  I have worked with Agile programming in Scrum teams. |
| Programming languages and techniques | PHP, Laravel, Python, Perl, JavaScript, Angular, Vui, React, and Node |
| Databases | MySQL, SQL Server. I have developed a database tool that reads a database from SQL Server and generates WPF code in C# for a graphical interface. |
| Tool and environments | MS Visual Studio, Visual Studio Code, NetBeans, Qt Creator, Eclipse, and PHP Storm |
| Managerial skills | Worked as a schoolteacher, which requires a lot of management skills :) |

# ASSIGNMENT EXPERIENCE

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# PREVIOUS EMPLOYMENT

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| 2017 – 2018 | **Chas Academy, Stockholm**  Head teacher in full stack development. Taught programming in PHP, SQL, Laravel, JavaScript, Angular, React, Vui, and Node. |
| 2019 | **Snitz Elementary School, Stockholm**  Taught mathematics, physics, and technology for pupils with neuropsychiatric function disorder in need of extra support. |
| 2018 | **The European Gymnasium, Strängnäs**  Taught mathematics at the chemical and physics program as well as the programs for business administration and social science. |
| 2017 – 2018 | **Thomas Gymnasium, Strängnäs**  Taught mathematics at the introduction program well as the programs for business administration and social science. |
| 2015 – 2017 | **Nova Software, Falköping**  Nova Software recently celebrated their first 35 years. The company has from the beginning targeted the scheduling market. Their latest product is called School24, which is a distributed tool for administration and scheduling in school environments.  I worked with development of School24 in .Net and HTML, JavaScript, C#, SQL and MFC (Microsoft Foundation Classes) in the whole system, from the database to the graphical user interface.  The work was done in Scrum team with meetings on a regular basis. The team had meetings each morning, where each member reported what they had done the previous day and what they planned to do the next day. We worked in sprints of two weeks, with meetings where we evaluated the result of the last sprint and planned the work of the next sprint. |
| 2011 – 2014 | **MaximaTecc, Västerås**  I was hired as an industrial graduate student at MaximaTecc in Västerås, a company specialized in safety-critical systems. I worked with SafeCer, a research project that was financed by EU with participants from thirty companies and universities from all around Europe. The aim of the project was to increase the quality of safety-critical systems.  I participated by developing a tool that analyzed the safety of a system by studying its architecture and safety definition. The tool has been described in a series of conference papers. I was the main author of a paper that won the Best Paper Award at the International System Safety Conference (ISSC) in Boston 2013. |
| **2008 – 2011** | **Mälardalen University, Västerås**  I studied Software Engineering. I hade the privilege of serving as a guest researcher at Swinburne University in Melbourne, Australia. I participated in a research team of traffic safety, the result has been described in a series of research reports.  During the graduate studies, I got in touch with SPARK, a project with the aim of making Ada a (even) more safe language. Ada was from the beginning object-based rather that object-oriented. As Ada has a strong profile against parallel execution it has been difficult to expand Ada with traditional object-orienting. However, later versions of Ada include a type system that forms a kind of object-orienting. |
| **2010** | **Addiva, Västerås**  I was on leave from Mälardalen University during one semester to work for Addiva AB in Västerås, a company specialized in developing high-quality software. I worked in a Scrum team with development of administration systems in .Net with C# and SQL. During this period, I developed a database tool. |
| **2007 – 2008** | **Visma SPCS, Växjö**  Visma SPCS is a well known company in Växjö specialized at development, sales and support of administrative bookkeeping systems. I worked with development in C++ on one of their distributed systems. |
| **2005 – 2007** | **The Nils Ericson Gymnasium, Trollhättan**  The Nils Ericson Gymnasium in Trollhättan is a high school with focus on technology and science. I worked as a teacher in computer science and mathematics. |
| **2004 – 2005** | **Practical-Pedagogical Education, Umeå**  I become a certified teacher in computer science, mathematics, and English. |
| **2003 – 2004** | **Sussex University, Brighton, England**  I studied English for two semesters at Sussex University in Brighton, Great Britain. I had a few years earlier studied English for one semester at Stockholm University. |
| **1998 – 2003** | **Self-Employed Consult, Kista**  At first, I had a private firm, and then a limited company. I worked full time for the company in Stockholm and Umeå, mostly with teaching in computer science. I gave intensive courses in C, C++, and Java programming for the industry. |
| **1997 – 1998** | **SymSoft, Kista**  SymSoft is a small company in Kista. Mostly, I worked with administrations system for the Défense in in C++/MFC and Java. |
| **1990 – 1995** | **Master of Engineering in Computer Science, Umeå University**  The education was mostly focused on software development and mathematics. I learned to program in many languages. I studied parallel execution on some of the super computers of the time. |

# EDUCATION AND COURSES

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|  | Education |
| **2008 – 2014** | Technological licentiate in formal verification, Mälardalens University |
| **2004 – 2005** | Gymnasium Teacher in Mathematics, English, and Computer science, Umeå University |
| **1990 – 1995** | Master of engineering in Computer Science, Umeå UniversityCourses |
| **2003 – 2004** | English, B and C level, Sussex University, Brighton, England |
| **1998 – 1999** | English, A level, Stockholm University |
| **1997 – 1998** | Business Administration, A level, Umeå University |
| **1996** | Rhetoric, pedagogic and presentation technique, Umeå University |
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# PERSONAL INFORMATION

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| Personal characteristics | I regard myself to be social, easy to get along with and enjoying a certain sense of humor, I took a class in stand-up comedy a couple of years ago. I am interested in group dynamics and human interaction; I like to get to know new people and be a part of a team. However, I am also meticulous, independent, and goal oriented. Given a problem, I do not quit until I have solved the problem. |
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| Interests and hobbies | During my spare hours I use to walk, dance and workout at the gym. I aa SAFE Certified Aerobics instructor.  During the summers, I use to hike along the Kings Trail in the northern parts of Sweden. I have worked as a cabin host at Abiskojaure mountain cabin.  during my time as a student at Umeå University I was involved in the nations, I was responsible for a beer tent during the Rounders festival.  I have danced for many year: bugg, lindy hop, and foxtrot. During my time a Ph.D. candidate in Västerås I was a member of the board of the Mariotterna dance club.  I am a PADI Dive Master and I hold C certificate in sailplaning. |
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| Driving License | B |
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| Citizenship | Swedish |
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| Languages | I speak Swedish and English fluently. I have studied English at university level in Great Britain. |
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| Born | 1968 |
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