Anton Ekblad

Computer Scientist
Software Developer

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Skills
Overview

Programming

Newbie ————————➔ *Expert*

Haskell • C • C#

JS • Java • Erlang • SQL

Python • PHP • C++

Agda • Promela • Bash

Spoken Languages

Swedish (native) • English (fluent)
Japanese (JLPT N2) • German (basic)

Projects
github.com/valderman

Haste – the most performant Haskell-to-JS compiler on Earth

Haste.App – distributed, heterogeneous Haskell web framework

Selda – cross-backend database query language

Aplite – high-performance ASM.js DSL with automatic performance tuning

Shellmate – cross-platform shell scripting in Haskell

Experience

May. 2018 – present **Software Developer** **Wint**[SE]
Working with cloud tech and web apps in the .NET ecosystem. Co-designed and implemented mission-critical infrastructure for secure backups, direct payment bank integrations, etc. Driving force behind randomized testing.

Apr. 2013 – Mar. 2018 **PhD Candidate** **Chalmers University of Technology**[SE]
Successfully defended my thesis-by-publication on the topic of compilers, domain-specific languages and functional programming techniques for distributed web applications; supervised one MSc. thesis and taught concurrency, parallelism, OOP, functional programming, and compiler construction. Key accomplishments include creating the popular Haste and Selda open source projects, an invited talk at the MLOC.js developer conference, and the spearheading of oral examinations for programming assignments.

Aug. 2014 – Oct. 2014 **Research Intern** **Microsoft Research**[UK]
Hacking on the compiler for the Ziria programming language. Together with Microsoft researchers, I designed and implemented prototypes for a pipeline parallel execution model and compilation scheme for Ziria. Ziria is a domain-specific language for software-defined radio applications with stringent performance and latency requirements.

Oct. 2012 – Mar. 2013 **Full Stack Developer** **Scrive**[SE]
Implementing new features for, fixing bugs in, and testing (automated and otherwise) our e-signing service. Also did web API documentation, copy translation, and took part in designing and implementing features and campaigns to enlarge and activate our user base. Was briefly head of QA, before leaving to pursue my PhD.

Aug. 2012 – Oct. 2012 **Embedded Software Developer** **Auto-Maskin**[SE]
Embedded software development for Linux- and microcontroller-based marine engine control systems, using C, C++, and Qt. Responsible for a safety-critical monitoring product, which was inherited from another vendor due to quality issues. The project to resolve the quality issues, while adding several new features, was completed in less than half the allotted time.

Jun. 2011 – Aug. 2011 **Software QA Engineer** **Academic Work / Collector Bank**[SE]
Feature/load/security/performance testing, test automation and specification drafting, for a .NET-based payment system. Key accomplishments include the introduction of randomized testing and the discovery of several critical security vulnerabilities.

Aug. 2009 **Web Developer** **Academic Work / +8**[SE]
Was the sole developer of an in-house PHP/JavaScript/MySQL warehouse management web application. Project inherited without handover from a previous consultant.

Education

2013 – 2018	**PhD., Computer Science**	**Chalmers Univ. of Technology**[SE]
2008 – 2012	**BSc. + MSc., Computer Science**	**Gothenburg University**[SE]
2008	**Japanese Studies**	**Kansai Gaidai University**[JP]
2005 – 2007	**Japanese Studies**	**Univ. of Linköping, Lund, Gothenburg**[SE]

Publications

Peer Reviewed

- Anton Ekblad. 2017. **A meta-EDSL for distributed web applications.** In Proceedings of the 10th ACM SIGPLAN International Symposium on Haskell (Haskell 2017). ACM, New York, NY, USA, 75-85.

- Anton Ekblad. 2016. **High-performance client-side web applications through Haskell EDSLs.** In Proceedings of the 9th International Symposium on Haskell (Haskell 2016). ACM, New York, NY, USA, 62-73.

- Anton Ekblad. 2015. **Foreign exchange at low, low rates – A lightweight FFI for web-targeting Haskell dialects.** In Proceedings of the 27th Symposium on the Implementation and Application of Functional Programming Languages (IFL '15). ACM, New York, NY, USA, Article 2, 13 pages.

- Anton Ekblad and Koen Claessen. 2014. **A seamless, client-centric programming model for type safe web applications.** In Proceedings of the 2014 ACM SIGPLAN symposium on Haskell (Haskell '14). ACM, New York, NY, USA, 79-89.

Non-Peer Reviewed

- Anton Ekblad. 2018. **Functional EDSLs for Web Applications.** PhD Thesis, Chalmers University of Technology.

- Anton Ekblad. 2015. **A distributed Haskell for the modern web.** Licentiate Thesis, Chalmers University of Technology.

- Anton Ekblad. 2012. **Towards a declarative web.** Master of Science Thesis, University of Gothenburg.

- Anton Ekblad. 2011. **A language for functional web programming.** Bachelor of Science Thesis, University of Gothenburg.