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🌐 Leonidas-from-XIV

Experience

- 2021-now **Software Consultant**, *Udviklings- og Forenklingsstyrelsen*, Copenhagen.
Working on a finite-state machine that is responsible for the valuation of Danish real estate for property taxation.
Technologies used: Clojure, ClojureScript, Reagent, Terraform, AWS, PostgreSQL, Git, Jenkins
- 2017-2021 **Backend Developer**, *Issuu ApS*, Copenhagen.
Working on backend analytics and serving recommendations. Maintenance and modernization of legacy systems. Planning and implementation of modern replacements with focus on improving on previous shortcomings. Implementation, deployment and monitoring of statistics system handling 500.000 events per minute at peak. Creation of explicit detection service using AWS Rekognition, with custom-written OCaml bindings.
Creating tooling for more reliable deployments. Modernization of development practices, implementation of private OCaml package repository. Publication of a variety of free software packages for OCaml, contributions to existing projects. Technical blogging.
Technologies used: OCaml, OCaml Package Manager (OPAM), Jane Street Base, Core & Async, Dune, js_of_ocaml, PPX, AMQP, AWS Rekognition, Redis, MySQL, PostgreSQL, Graphite, Grafana, Docker, Docker Swarm, Kubernetes, Git, Jenkins, Travis CI
- 2015-2017 **Software Developer**, *stylefruits GmbH*, Munich.
Implementing and extending REST API endpoints, implementation of a product feed, backend administration user interfaces, statistics collection.
Technologies used: Clojure, Liberator, MySQL, PostgreSQL, Elasticsearch, React.js, Reagent, Bootstrap, AMQP, Docker, Git
- 2014-2015 **Master's Thesis Student**, *Realtime Technology AG*, Munich.
Implementing a randomized testing solution similar to Haskell's *QuickCheck* for a custom ML-inspired programming language by extending its compiler.
Technologies used: OCaml, OPAM, menhir (parser generator), LLVM
- 2014-2015 **Tutor**, *Technische Universität München*, Munich.
Tutor for "Einführung in die Informatik 2" (Computer Science 102), teaching students functional programming concepts using Haskell and *QuickCheck*.
- 2008-2014 **Programmer/Administrator**, *Watchdesigner.de*, Ismaning.
Development of JavaScript and CoffeeScript libraries, set-up and maintenance of web shop, maintenance of virtual servers.
Reevaluation of virtualization solutions, set up of KVM via Libvirt. Migration of POINT tec setup. Addition of SPF and DKIM to mail configuration, set up of backup MX to increase reliability, introduced versioning of configuration files. Hosting of multiple sites in their own virtual environments. Hardening of server with automated banning of SSH login attempts and filesystem checksums.
Technologies used: KVM, libvirt, Debian GNU/Linux, Apache, nginx, Python, JavaScript, CoffeeScript and Git.
- 2013-2013 **Tutor**, *Technische Universität München*, Munich.
Tutor for "Grundlagen Algorithmen und Datenstrukturen" (Introduction to algorithms and data structures), teaching students \mathcal{O} notation, various types of hashing, tree structures

Languages

German	native	<i>grew up in Germany</i>
Polish	native	<i>went to school in Poland</i>
English	fluent	<i>C2 in speaking, writing and understanding</i>
French	basic	<i>High School education</i>
Japanese	beginner	<i>lived one year in Japan</i>

Computer Languages

Advanced	Clojure, OCaml, Python
Intermediate	Elm, C, Go, JavaScript, \LaTeX
Basic	Bash, Io, Factor, Haskell, Java, PostScript, Ruby, Rust, Scala, Vala
Very impressed	Haskell, OCaml
Impressed	Clojure, Scheme, Factor, Io, Rust
Not impressed at all	Bash, C, Go, Java, JavaScript, \LaTeX

Education

- 2013–2015 **Master of Science in Computer Science**, *Technische Universität München*, Munich.
Master's thesis: "Randomized testing for hybrid CPU/GPU shader description languages". Implemented a generative testing framework in the compiler of non-general-purpose language to allow for *QuickCheck*-like testing.
- 2008–2013 **Bachelor of Science in Computer Science**, *Technische Universität München*, Munich.
Bachelor's thesis: "A functional streaming API for OCaml". Explored usage of advanced functional concepts like monads in practical usage context, specifically at wrapping a data compression library via OCaml.
- 2011–2012 **Research student**, *Nagoya University*, Nagoya, Japan.
Research at the Embedded and Real-Time Systems Laboratory on monitoring the system state of the Linux kernel via virtualization. A Dual-OS hypervisor using ARM Trustzone extensions is utilized to run a trusted RTOS on the same device which checks the state of the GPOS with regard to crashes and intrusions.
- 2000–2008 **General qualification for university entrance**, *Werner Heisenberg Gymnasium*, Garching.

Projects

- Master project Subset of Caml Light compiler written in Scala using JFlex and CUP that compiles to JVM bytecode.
- Master project Linux system administration: Set up and integration of servers: DHCP, DNS, HTTP, SQL, LDAP, SMTP, POP3, IMAP4, NFS, Monitoring
- Bachelor project LEGO Mindstorms robots to pick up items, identify them via RFID, explore a maze and put items down at color coded places in the maze.

Talks

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| 2015 | From Imperative to Functional APIs (english) | <i>LambdaCon</i> |
| 2015 | Brave New OCaml World (english) | <i>Lambda Days</i> |
| 2013 | Cre Workshop (english) | <i>defworkshop</i> |

2013	Using static typing features for fun and profit (english)	<i>defmunich</i>
2012	10 years of Python-Forum (german)	<i>PyCon DE 2012</i>
2011	Software Transactional Memory (english)	<i>TU München</i>
2010	A Caml Light compiler for the JVM (german)	<i>TU München</i>
2010	PostScript madness (german)	<i>μC³</i>
2010	Macros in Scheme (german)	<i>TU München</i>
2009	ctypes: Python-Bindings without C code (german)	<i>μPy</i>
2009	Why Scheme rocks (english)	<i>munich-lisp</i>
2009	Higher-order Python (german)	<i>μPy</i>
2008	Bazaar, the DVCS (german)	<i>μPy</i>
2008	Unicode in Python, demystified (german)	<i>μPy</i>
2008	Domain Specific Languages in Python (german)	<i>μPy</i>

Activity in Free Software Community

GitHub	Number of Free Software projects at github.com/Leonidas-from-XIV , among these <code>xml2js</code> , a popular XML parser frontend for Node.js
Python-Forum	User since 2003, moderator since 2004, administrator from 2005 to 2020
μPy	Former organizer of the Python User Group Munich
Arch Linux	Maintainer of packages in Arch User Repository
Debian	Participant in “squeeze” Bug-Squashing-Party and Debian User Group Munich
CCC	Member of the Chaos Computer Club e.V. until 2012
μC ³	Member of the Chaos Computer Club Munich e.V. until 2012

Conferences

2015	Speaker at LambdaCon
2015	Speaker at Lambda Days
2012	Speaker at PyCon DE
2012	Participant at LinuxCon Japan
2011	Participant at the Chaos Communication Camp
2010	Helper at the 27 th Chaos Communication Conference
2010	Participant at Google Developer Day in Munich
2009	Helper at the 26 th Chaos Communication Conference
2009	Participant at Hacking at Random