walterschulze

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location
London, UK

programming
Coq, Golang, Haskell, Elm, Erlang, Git, Latex

open source
Katydid: Validation Language for Deeply Nested Structures

Goderive: Derives Go functions

GoGraphviz: Go Parser for Graphviz

gogoprotobuf: Protobufs for Go

publications
IEEE Multimedia: Music Generation with Mixed and Higher Order Hidden Markov Models

interests
Programming Language Design, Guitar and Music Production, Stand-up Comedy

employment

2021 ... **Meta** — London, UK
Frontend UI Engineer: React, Hack
Developed device managed UI for Portals. Conducted behavioural interviews.

2020 – 2021 **WhatsApp** — London, UK
Erlang Types and Tooling Engineer: Erlang
Projects included: erlfmt: A code formatter for erlang, a code generator for concurrency and VSCode integration. Conducted coding interviews.

2018 – 2020 **Facebook** — London, UK
Senior Software Engineer: Haskell, Python, Rust
Extended security eDSL in Haskell, which significantly reduced false positives. Integrated QuickCheck into Haxl. Maintained the company's test runner. Designed foundation for new test runner using a Monad with Monoid constrained elements to create a batched stream for concurrent test running. Mentored students.

2016 – 2018 **eBay Classifieds Group** — Amsterdam, The Netherlands
MTS1 Software Engineer: Elm, Go, Docker, Filebeat, Cassandra, Kafka, Consul, Nomad, Grafana, Kibana and Jenkins
Created a translating reverse proxy that shows eBay ads on classifieds sites, serving 2000 requests per second. Added an A/B testing framework, role based login using LDAP and a new Frontend using Elm. Interviewed over 50 candidates, provided support for five local markets and served on the global Architecture team.

2011 – 2016 **Vastech** — Stellenbosch, South Africa
Query Language Developer: Go, Protobufs, Javascript
I was part of a team that developed a distributed database from scratch, for fast writing of time series data. I was responsible for the query language, matching algorithm, metadata serialization, index configuration, update method for our write only database and the UI. I also initiated the company's open source policy and founded and lead the intern program.

2006 – 2011 **Various companies** — South Africa
Mobile Developer: Java
See my LinkedIn Profile

education

2014 ... **PhD** Informatics **(part time):** Coq, Haskell, Go — Stellenbosch University
Currently busy working on a validation language for tree structures.

2007–2009 **MSc** Computer Science **(cum laude):** Python, XSLT — Stellenbosch University
A Formal Language Theory Approach to Music Generation
Generated music with Mixed order Hidden Markov models.

2003 – 2006 **BSc and BSc Honours** Computer Science: C, Java — Stellenbosch University