walter schulze

awalterschulze@gmail.com | github.com/awalterschulze | linkedin.com/in/schulzewalter/

location
London, UK

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

open source
Katydid:
Validation Language for Deeply Nested Structures

Goderive ★950
Derives Go functions

GoGraphviz ★460
Parser for Graphviz

gogoprotobuf ★5000
Protobufs for Go

erlfmt ★320
Formatter for Erlang

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

talks
▶Ragalur Expressions
▶Goderive
slides.com/walterschulze

interests
Proof Assistants
Guitar
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 f **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
🔗 linkedin.com/in/schulzewalter/

education

2014 ...   ☰ **PhD** Informatics **(part time):** Coq, Haskell, Go   Stellenbosch University
Currently busy working on a validation language for tree structures and proving it's correctness in Coq.

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

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