

waltersschulze

 awaltersschulze@gmail.com |     @awaltersschulze

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

 Recorded Talks
 Slides




interests

Proof Assistants
Guitar
Music Production
Stand-up Comedy

employment

- 2021 ...  **Meta** London, UK
Frontend UI Engineer: React, Hack
Developed device manager 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
 [linkedin.com/in/awaltersschulze/](https://www.linkedin.com/in/awaltersschulze/)

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