Xander van der Goot

Software Engineer

Sofia, Bulgaria
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Github LinkedIn

Technical Skill

- Programming Languages: Haskell, Rust, Elm, Erlang, Elixir, Python
- Technologies and Platforms: Linux, PostgreSQL, Nix, Google Cloud Services, Redis
- In General: Functional Programming, Distributed Systems, Performance Engineering

Work Experience

Independent Contractor   2023-Present

Haskell Software Engineer   2021–2024
Channable (Remote, contracting since 2023)

- Designed a platform to shift demanding web server download requests to a dedicated job scheduler, ensuring that users receive complete and valid downloads.
- Improved user experience by implementing a system that allows users to monitor the progress of data generation and easily retrieve their downloads upon completion.
- Upgraded Channable's custom reverse proxy for distributed use by designing a leaderless distributed rate-limiting algorithm.
- Achieved horizontal scalability in the import pipeline by transferring feed storage from PostgreSQL to Google Cloud Storage.
- Created a column-oriented file format tailored for compact regions, reducing the workload on garbage collection. This format, designed for streaming, achieved a 95% size reduction compared to the previous system.
- Discovered a rare bug in GHC software transactional memory (STM) system where two concurrent reads lead to resource starvation.
- Led cross-departmental teams of 3 to 6 people.
- Mentored junior team members.

Technologies: Haskell, Python, Mypy, PostgreSQL, Nix, Redis, Grafana, Hashicorp

Full Stack Software Developer   2020–2021
Driebit

- Created semantic web applications for educational and cultural institutions.
- Optimized a client's use of mapping services, leading to a yearly cost savings of €10,000.

Technologies: Erlang, Elm, Haskell, PostgreSQL, Nix, Docker

Software Developer   2015–2016
Cointel Cybersecurity

- Developed Bitcoin forensic investigation tools with funding secured from a Small Business Innovation Research (SBIR) grant.

Technologies: Python, PostgreSQL, Haskell

Certification

UI Design 2024–Present
Learnui.design

UX Design 2024–Present
Learnux.design

GHC contributor's workshop 2023
Haskell Foundation

Education

MSc. Computing Science, Utrecht University 2016–2019
Programming Language & Technology, on hold.

- Case study into applying formalized technology mapping to a microprocessor; acknowledged in "Verified Technology Mapping in an Agda DSL for Circuit Design".

BSc. Electrical Engineering, University of Twente 2011–2014

Awards

Finalist ASML Technology Scholarship 2014

Interests

- Dancing, Rock climbing, Bouldering
- Origami, Drawing
- UI/UX design, Concatenative and Array Programming Languages