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Ru Horlick

I am a Computer Scientist, Software Engineer, and Environmental Educator with experience in functional programming and its mathematical foundations. I also have experience facilitating teams and coaching them to adopt self-organising practices.

Experience

Dec 2020 – Present
Haskell Developer, *Stack Builders*.
Completed a three-month project to expose an API for an existing software solution. Delivered to client's satisfaction on time and on budget.

June 2020 – Dec 2020
Senior Engineer, *Regen Network Development*.
Spearheaded improvements in testing across the core Regen Ledger by adding property tests. Worked closely with CTO to design and implement the core product, an ecocredit trading platform. Contributed to community infrastructure of Cosmos SDK through bug fixing, code review, and upstreaming useful libraries.

May 2018 – Sep 2019
Senior Haskell Developer, *IOHK*.
Worked in a team of four to formalise, implement, and property test ledger rules for the Cardano blockchain. Personally designed and prototyped a hard-fork combinator to allow seamless transition across major protocol updates. Also worked with Head of HR to run a trial of Holacracy, a self-organising system, in the organisation. Personally, facilitated and implemented Holacracy within the ledger team.

Sep 2017 – May 2018
Lead Software Developer, *Money&Co*.
Rebuilt legacy Java codebase using Haskell and Nix. Created type-safe APIs for communicating between back and frontends. Used GHCJS to compile Haskell to Javascript for frontend. Had control over software architecture and development.

Mar – Sep 2017
Software Development Engineer, *Myrtle Software*.
Worked on compiling neural networks to FPGAs, using Haskell and Nix. Was offered a senior position, including responsibility for team productivity.

Education

2016 – 2017
MEng Computer Science, *University of Cambridge*, Distinction.
Thesis: Formalised the theory of Generalised Species in Homotopy Type Theory (HoTT) using Agda. Worked closely with leading researcher in the field, who offered me a research position to continue our work.
Modules: Category Theory, Multicore Semantics & Programming, Advanced Functional Programming, Distributed Games & Strategies, Interactive Formal Verification.

2013 – 2016
BA Computer Science, *University of Cambridge*, 1st Class (81%, Rank: 8/81).
Implemented Path ORAM, a cryptographic primitive, in OCaml to search encrypted documents. Analysed performance and security properties in a dissertation. Presented ideas to Microsoft Research Cambridge.

Other

Programming Languages
- Haskell, Rust, OCaml, Hoon
- Javascript, Nix, Agda, Java

Tools
- Unix, git, NixOps
- Octave, LaTeX