

# WILLIAM FISHER

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<http://github.com/filwisher>

## SUMMARY

*C, Haskell, Javascript, Go.*

Worked in web development, studying type theory. Experience with Linux, web servers, and databases. Interested in {functional,distributed,systems} programming, mathematics, and cooperatives. Open source enthusiast.

## EDUCATION

**MSc. Computing Science, Imperial College (provisional Distinction) 2015 – Present**

- Currently completing a thesis in the area of type theory. Proposing an extension to Haskell based on a  $\lambda$ -calculus with exceptions. Using skills in proofs, type theory, and Haskell.

- Successfully completed group project in the area of distributed systems. Designing caching algorithms in content-based networks using Icarus, Python, and producing visualizations in Javascript with D3.

**Modules:** Networks and Distributed Systems, Concurrency, Algorithms, Robotics, Computer Architecture, C++ Programming, and Operating Systems.

**BA Music, University of Leeds (First Class) 2011 – 2014**

**Modules:** Composition (**indeterminate, algorithmic, cellular-automata**), Aesthetics & Criticism (phenomenological, post-structuralist, feminist), Music Technology (*Supercollider*, *MaxMSP*). Dissertation on aesthetics of sexualization in popular music.

**Fortismere Secondary School 2006 – 2010**

**A Levels:** Philosophy *A*, Mathematics *B*, Music *C*; **GCSEs:** 2 *A\**, 5 *A*, 3 *B*

## EMPLOYMENT

**Software Developer and Teacher, Founders & Coders 2014 – 2015**

Founding member of an award-winning web development cooperative. Responsibilities included planning project architecture and implementation details, and teaching groups of 16 students how to write web-based applications.

## PROJECTS

**Camden Maps, Camden Council – <http://maps.camden.gov.uk> 2014**

*Lead Developer.* A service for finding local amenities and live information about street works. Updated an undocumented, legacy API from SOAP to RESTful using *Node.js* and *Angular*.

**Founders & Coders – <http://www.foundersandcoders.org> 2014 – 2015**

*Founding Member.* A cooperative with the aims of providing free, full-time coding courses and helping course graduates to find employment as web developers.

**Self-Driving Robot, Imperial College – <https://github.com/filwisher/py-robot> 2016**

Implemented a program for allowing a robot with a single ultrasonic sensor to navigate between waypoints in a simple maze using Bayesian inference, *Python*, and a Raspberry Pi.

**Caching Algorithms, Imperial College – <https://github.com/filwisher/distributed-project> 2016**

*Project lead.* Design and simulate new caching algorithms for content-addressed networks. Extended a *Python* network simulator to test different approaches. Implemented a web-based tool to visualize algorithms in *Javascript*.

## PRIZES

**Young Cooperator's Prize, AltGen:** Awarded to Founders & Coders for our innovation and commitment to cooperative values.

**Lord Snowdon Prize, University of Leeds:** Awarded for notable achievement in Music, for graduating with the highest grade in the year.

## MISCELLANEOUS

**Skills:** Web development, SQL and NoSQL databases, browser and web server environments, Unix, debugging, Git version control, Travis CI, teaching, algorithms, concurrency, and networks.

**Languages:** *Javascript* and *Node.js* (fluent); *Go*, *C*, *Python*, (familiar); *Supercollider* and *Puredata* (audio programming); *C++*, *Prolog*, (some experience); *Haskell* (currently pursuing). Very interested in learning new languages.