14 Cypress Ct.
Aurora, ON, L4G 6S8
☎ 647-771-5414
✉ george.steel@gmail.com
github.com/george-steel

George Steel

Technologies and Languages

Languages: C++, JavaScript, Haskell, Python, SQL, TEX

Technologies: WebAnimations, Blink, WPT, CSSWG specs, Warp, OAuth, Persistent/Esqueleto, Postgres/CockroachDB, React-native, GTK, EPUB, Flask

Education

2010 – 2016 **University of Toronto**, *Hon. B. Sc. in Mathematics*.

- Minors in Computer Science and Biology.
- Graduated with High Distinction (GPA 3.9).

Employment History

Jun 2019 – Nov 2020 **Software Developer**, *Chrome Animations*, Google Canada.

- Helped complete and launch the WebAnimations API in Blink (the rendering and Javascript engine powering Chrome and Electron), giving a unified Javascript interface to declarative animations from all sources.
- Contributed a section to the WebAnimations spec (including cross-browser Web Platform Tests) allowing the creation and manipulation of animations targeting pseudo-elements.
- Contributed numerous bugfixes and optimizations across the Blink animations stack. This included allowing percentage transform animations (sidebars and some popups) to run off-thread, allowing them to run more smoothly despite the actions of other scripts on the same page.
- Contributions listed at `https://chromium-review.googlesource.com/q/owner:gtsteel@chromium.org`

Nov 2017 – Feb 2019 **Full-stack Software Developer**, *Satsuma Labs*.

- Created a prototype mobile application using a Haskell backend and a React-Native frontend.
- Developed a number of open-source libraries furthering the Haskell web service and react-native ecosystems. (Available at `https://github.com/SatsumaLabs`)

May 2016 – May 2017 **Software Developer**, *Prof. Peter Jurgec*, Linguistics, University of Toronto.

- Created browser-based educational software used in introductory phonology courses.
- Rewrote and further developed a research tool for analyzing the relative frequency of sound patterns. This involved finite automata and maximum entropy machine learning.

Sept 2013 – Mar 2014 **IT Assistant**, *ENAGB Youth Program*, Native Canadian Centre of Toronto.

Created a responsive website for the ENAGB program (featuring a dynamic events calendar) along with a variety of promotional materials (posters, brochures, business cards, etc.) for the program.

Summer 2011, 2012 **Summer Research Assistant**, *Prof. Gilbert Walker*, Chemistry, University of Toronto.

Performed spectroscopy and microscopy supporting research into creating nanoparticle based markers for medical diagnostic use, improving the sensitivity non-destructive procedures for determining particle shape.

Summer 2010 **Intern**, *Kerr Vayne Systems*.

Created a web application to stream real-time data for schedule display in a broadcast automation system.

Releases and Publications

2019 **persistent-spatial**, `https://hackage.haskell.org/package/persistent-spatial`.

A structure for storing and indexing geographic coordinates which can be used with any SQL database.

2017 **Maxent Phonotactic Learner**, `https://github.com/george-steel/maxent-learner`.

A tool for automatically inferring phonotactic grammars from a lexicon and using those grammars to generate random text, based on Hayes and Wilson's *A Maximum Entropy Model of Phonotactics and Phonotactic Learning*.

2017 **frpnow-gtk3**, `https://hackage.haskell.org/package/frpnow-gtk3`.

High-level interface for GTK3 with FRPNow integration.

2016 – 2017 **PhonoApps**, *with Prof. Peter Jurgec*, `http://phonology.us/`.

Computational and learning tools for phonologists.