

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, 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 – **Software Developer**, *Chrome Animations*, Google Canada.
- Nov 2020
- 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 – **Full-stack Software Developer**, *Satsuma Labs*.
- Feb 2019
- 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 – **Software Developer**, *Prof. Peter Jurgec*, Linguistics, University of Toronto.
- May 2017
- 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 – **IT Assistant**, *ENAGB Youth Program*, Native Canadian Centre of Toronto.
- Mar 2014
- 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, **Summer Research Assistant**, *Prof. Gilbert Walker*, Chemistry, University of Toronto.
- 2012
- 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.