# Keefer C. Rourke

#### **Back-end Software Developer**

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keeferrourke

♥ Toronto, ON

## Experience

# Software DeveloperMay 2021 - Present ⊞Square Inc. - Cash AppToronto, ON ♀

#### Software Developer Co-op

May 2020 - Aug. 2020 🛗

Mozilla Inc. — Firefox

Toronto, ON 💡

- Rewrote Firefox File I/O subsystem in C++ in an effort to reduce cache contention and memory usage, while improving start-up performance
- Wrote comprehensive migration guide for the new File API
- Fixed bugs related to site-isolation in effort to mitigate Spectre-like vulnerabilities in the browser runtime

#### Software Developer Co-op

Jan. 2020 - May 2020 🛗

Square Inc. — Cash App

Toronto, ON 💡

- Designed and built a high-throughput internal load testing service
- Prevented critical production errors through scheduled live load tests
- Collaborated with product teams to integrate with their services

#### Software Developer Co-op

May 2019 - Aug. 2019

Square Inc. — Cash App

Kitchener, ON ♀

- Led design and development of a software security service to defend against dependency supply chain attacks on the JVM
- Was responsible for the entire software development life-cycle
- Shipped new features to the open-source misk microservice framework for Kotlin, including overhauled service coordination logic

#### Lead Developer & Research Assistant

Jan. 2019 - Dec. 2019 🛗

U of Guelph School of Computer Science

Guelph, ON 👂

- Led development, integration, and testing of the web API for the eNuk environmental and health monitoring application
- Trained new research assistants to accelerate their understanding and contribution towards project goals
- Collaborated and liaised with external client development team

#### Software Developer Co-op

Apr. 2018 - Dec. 2018

Left Inc. - RightMesh

Metro Vancouver, BC ♀

- Led refactoring of monolithic code base into platform-independent modules, improving developer velocity and code quality
- Identified problems and proposed solutions for software security and reliability, particularly focused on trust models in decentralized systems
- Assisted with successful application for \$2.13M Mitacs Research Grant
- Awarded 2018 Co-op Student of the Year at the University of Guelph

### # Skills

#### **Programming**

Object-oriented, async/concurrent, functional & systems programming with:



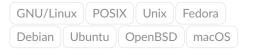
#### Back-end/DevOps

Development, integration, deployment, and use of:



#### **Operating Systems**

System administration, automation and deployment with:



#### Methodologies



## **m** Education

Honours Bachelor of Computing (Co-op)

May 2021 🛗

**University of Guelph** 

- Major in Computer Science
- Minor in Mathematics
- Cumulative weighted GPA: 4.0
- College of Engineering and Physical Sciences valedictorian

#### Lead Web Developer & Research Assistant

Jan. 2018 - Apr. 2018 🛗

University of Guelph School of Computer Science

Guelph, ON ♀

- Designed and developed secure, modular web application with NodeJS using the model-view-controller pattern
- Investigated capabilities and interoperability of mobile mesh networking with the web application server
- Led and participated in regular design meetings, ensuring organization and clear communication during development

#### Founder & Lead Developer/Designer

Nov. 2015 - Jan. 2019 🛗

Tokumei Co. — Anonymous Microblogging

tokumei.co/ 9

- Designed and implemented scalable ranking algorithms for trending posts/tags and a topics-based subscription model
- Attracted international interest for use and development of the platform from software developers in 4 countries
- Wrote comprehensive documentation aimed at both users and developers

## Presentations

Aug. 2018	2018 Indigenous Mapping Workshop (Invited)	Montréal, QC
	Using Mesh Technology to Support Climate Change Monitoring. Durish, N., Rourke, K. & Gillis, D.	
Jan. 2018	StarCon — Software Engineering Conference	Waterloo, ON
	Gloom, Doom, and the Internet, a talk about internet privacy, security, and data ownership. <i>Rourke</i> , <i>K.</i> https://krourke.org/projects/pres/starcon18	
May 2017	Ontario Centres for Excellence: Discovery Business Conference	Toronto, ON
	Exhibited Tokumei Co. to investors. Attendance was funded via youth entrepreneurial grant.	

## Awards & Scholarships

#### **Awards & Honours**

2021	E.B. MacNaughton Covocation Prize (\$1000 CAD)	University of Guelph	
	Awarded for demonstrating most excellent overall academic achievements and contributi	nonstrating most excellent overall academic achievements and contributions to campus/community.	
Jan. 2019	Co-op Student of the Year Award (B. Computing) (\$1000 CAD)	University of Guelph & Left Inc.	
	Awarded for outstanding workplace performance, academic achievement, and involveme	nt in the community.	
Jul. 2018	Major League Hacking Ethical Tech Award (\$10 000 USD)	Omidyar Network	
	Awarded for authoring a series of essays on ethics & technology. Funds used to attend the <i>Computing Congress</i> in Leipzig, Germany.	ne 35th annual Chaos	
2016-2019	Dean's List: College of Physical and Engineering Sciences	University of Guelph	
	Achieved greater than 80% semesterly averages in all full-time academic semesters.		

#### **Scholarships & Grants**

Oct. 2018	Michele and Maria Vannelli Scholarship (\$1000 CAD)	University of Guelph	
	Awarded for academic excellence and community leadership in the College of Physical and E	emic excellence and community leadership in the College of Physical and Engineering Sciences.	
Nov. 2017	Jay Majithia Scholarship (\$1000 CAD)	University of Guelph	
	Awarded for contributions to departmental research in the School of Computer Science.		
May 2017	OCE Youth Entrepreneurial Grant (approx. \$1000 CAD)	Ontario Centres for Excellence	
	Awarded funding to exhibit at the 2017 OCE Discovery business and technology conference in Toronto, ON.		
Sept. 2016	University of Guelph Entrance Scholarship (\$3000 CAD)	University of Guelph	
	Awarded upon acceptance to the University of Guelph for attaining greater than a 90% admission average.		