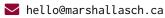
Marshall Asch

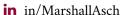


У @MarshallAsch





marshallasch.ca



I am a Computer Science Masters student with a love for wireless mesh networks and DevOps. Over the past several years I have been working on a project to help close the digital divide in northern Canada. I have also been falling in love with the realm of DevOps through my constant desire to achieve better pipelines to validate my code as well as to publish and deploy new versions in all of my various side projects, masters research, and personal server deployments. In my past work experience I have been converting all of the manually configured infrastructure to use Terraform IaC to de-silo the knowledge and to demystify the services that we depend on.

I have a passion for command-line tools, networking, servers, and open source projects. Most of my work has been on cli tools, DevOps tasks, and backend systems, but I do venture out into user land with web pages and full stack mobile apps.

Education

2019 – present

■ M.Sc. Computer Science, University of Guelph, Canada in Mesh Networking.

2015 - 2019

■ B.Comp. (Hons) Computer Science, University of Guelph, Canada. Degree with Distinction Recognition for Outstanding Academic Performance.

Open Source Projects

10/2021 - Present

OO Resources Offline Open source teaching resource to provide interactive course content and development dependencies in one place that does not require internet access.

05/2021 - Present

■ ns-3 Github CI pipeline C Continuous development tool to verify that modules built of the ns-3 network simulator compile and run as intended.

2021 - Present

■ ns-3 Static Access Frequency Module () Implemented and maintaining a module for the ns-3 network simulator.

work simulator.

2020 - Present

Iquidctl maintainer 🖸 Active Maintainer on the python liquid cooler controller CLI

2021 - Present

■ **Botomir maintainer ()** Active Maintainer on the node S Discord Bot application

Certification and Training

2021

■ Moo1 - MongoDB Basics Course. MonogoDB University.

M103 - MongoDB Basic Cluster Administration Course. MonogoDB University.

■ M121 - MongoDB Aggregation Framework Course. MonogoDB University.

Employment History

01/2021 - Present

Ir. DevOps Engineer, Value Connect, Guelph, ON.

01/2021 - 06/2021

■ Graduate Teaching Assistant (Compilers), University of Guelph, ON.

09/2020 - 12/2020

■ Graduate Teaching Assistant (Cloud Computing), University of Guelph, ON.

01/2020 - 04/2020

■ Graduate Teaching Assistant (Operating Systems), University of Guelph, ON.

09/2019 - 08/2020

■ **Left Mitacs Accelerate Intern**, University of Guelph, ON.

09/2019 - 12/2019

■ Graduate Teaching Assistant (Microcomputers), University of Guelph, ON.

Employment History (continued)

05/2019 - 08/2019 ■ University of Guelph Mitacs Accelerate Intern, Left, Maple Ridge, BC. 01/2019 - 04/2019 Lead Developer and Undergraduate Research Assistant, Working on the eNuk project, University of Guelph, ON. Undergraduate Teaching Assistant (Introduction to Computer Applications), University of Guelph, ON. 05/2018 - 08/2018 Mobile App Developer, Left, Maple Ridge, BC. 05/2017 - 08/2017 ■ IT Student, Lakeridge Health, Oshawa, ON. 06/2016 - 08/2016 ■ **High Ropes Instructor**, Camp New Moon, ON 06/2015 - 08/2015 High Ropes Instructor, Camp New Moon, ON 06/2014 - 08/2014 High Ropes Instructor, Camp New Moon, ON

Volunteer and Extra-Curricular Experience

Volunteering

and Information Science, Guelph, ON.

o9/2018 − 04/2020 Society of Computing and Information Science, System Administrator, University of Guelph, ON.

Committees

o9/2019 − present | IT Strategy Advisory Committee. University of Guelph, ON.

o9/2017 − 04/2019 Computer Infrastructure Committee School of Computer Science, University of Guelph, ON.

og/2018 − 04/2019 Curriculum Committee School of Computer Science, University of Guelph, ON.

Awards and Recognitions

09/2020 University of Guelph GSA Conference Runner up, Awarded to the two runner up presenters for the student run conference.

04/2020 **Erin Angus Graduate Student Award**. Awarded to a graduate student for making significant contributions to student life by Graduate Student Association.

■ CEPS Dean's Tri-Council Scholarship, (\$5000) Deans Scholarship awarded to NSERC award holders, University of Guelph, ON.

Awards and Recognitions (continued)

- Canada Graduate Scholarships-Master's Program, (\$17500) Natural Sciences and Engineering Research Council of Canada (NSERC) Scholarship, University of Guelph, ON.
- 02/2020 Ontario Graduate Scholarship, (\$5000) A merit based academic scholarship, University of Guelph, ON.
- o5/2019 College of Engineering and Physical Sciences Society of Excellence, Demonstrated academic excellence and outstanding contributions to the university community, University of Guelph, ON.
 - College of Engineering and Physical Science Deans Honours List, University of Guelph, ON. F15, W16, F16, W17, F17, W18, F18, W19
- 10/2018 **Dr. James Linders Scholarship**. (\$500) Awarded for achieving the highest third year average by the School of Computer Science, University of Guelph, ON.
- 09/2015 University of Guelph Entrance Scholarship. (\$2000) Awarded for being admitted with an average greater then 85% by the University of Guelph, ON.

Research Grants

- 04/2020 Northern Scientific Training Program. (\$2150) Awarded to conduct fieldwork in Northern Canada by Polar Knowledge Canada.
- 04/2019 Northern Scientific Training Program. (\$2307) Awarded to conduct fieldwork in Northern Canada by Polar Knowledge Canada.

Non Academic Presentations

- o9/2020 ■ Introduction to Git, Guelph Coding Community, Guelph, ON.
- o3/2020 MSc. Seminar Incorporation of Human Mobility in Data Replication Schemes in Mobile Ad Hoc Networks, Guelph Coding Community, Guelph, ON.
- 09/2019 ■ Advanced Git, Guelph Coding Community, Guelph, ON.
 - Introduction to BASH and Git, Guelph Coding Community, Guelph, ON.
- 12/2018 Major League Hacking Localhost Workshop, Society of Computing and Information Science, Guelph, ON.
- 11/2018 Mesh Networking, Guelph Coding Community, Guelph, ON.

Research Publications

Conference Proceedings

- Savić, I., **Asch, M.**, Rourke, K., Safari, F., Houlding, P., Fraeys de Veubeke, J., Ernst, J. & Gillis, D. (2021). M-ODD: A Standard Protocol for Reporting MANET Related Models, Simulations, and Findings [in press]. in press.
- Asch, M., Seymour, P. F., Ernst, J. & Gillis, D. (2019). Incorporation of Node Mobility in Data Replication Schemes in Mobile Ad Hoc Networks [Oral presentation and Preceding], In 2019 IEEE 10th Annual Information Technology, Electronics and Mobile Communication Conference (IEMCON), Vancouver, BC, Canada, IEEE. Oral presentation and Preceding. https://doi.org/10.1109/IEMCON.2019.8936268
- Durish, N., Gillis, D., Seymour, P. F., Rourke, K., **Asch**, **M.**, Raturi, S., Hughes, B., Flowers, C., Shiwak, I., Wood, M. & Ernst, J. (2019). Bridging the digital divide in the circumpolar north [abstract], In *Labrador research forum*, Happy Valley-Goose Bay, Labrador, Canada.

- Gillis, D., Durish, N., Rourke, K., **Asch**, **M.**, Knarr, J., Samuels, J., Kipp, A., Sawatzky, A., Middleton, J., Borish, D., Bell, I., Cunsolo, A., andCharlie Flowers, I. S., Wood, M. & Harper, S. L. (2019). Supporting community-based monitoring with technology in the circumpolar north [abstract], In *Labrador research forum*, Happy Valley-Goose Bay, Labrador, Canada.
- Durish, N., Gillis, D., Seymour, P. F., Rourke, K., **Asch**, **M.**, Raturi, S., Hughes, B., Flowers, C., Shiwak, I., Wood, M. & Ernst, J. (2018). Bridging the digital divide to support community-based monitoring in the circumpolar north [abstract], In *Arcticnet*, Ottawa, Ontario, Canada.

Conference Presentations

- **Asch**, **M.**, Lin, X. & Gillis, D. (2020). Impact of social interactions on mobile ad hoc networks. *Graduate Students Association Virtual Conference, Guelph, Canada*.
- **Asch**, **M.**, Rourke, K., Seymour, P. F., Durish, N., Flowers, C., Wood, M., Gillis, D. & Ernst, J. (2019). Bridging the digital divide with mobile ad hoc networks in the circumpolar north. *Western Student Research Conference, London, Canada*.

Skills

Languages ■ Java, sQL, BASH, Languages ■ Javascript, Python

Databases Mysql, MongoDB.

Frameworks ExpressJS, DiscordJS, ns-3, Nginx Web Server.

Tools ■ git, Github Actions, Bitbucket Pipelines, Aws, Terraform, Docker, Docker-Compose.

References

Available on Request

Last updated: 24th November 2021