Marshall Asch

DevOps Engineer

✉ hello@marshallasch.ca 🌐 marshallasch.ca 📍 Guelph, ON in MarshallAsch ⚙ MarshallAsch

› Employment

DevOps Engineer – Value Connect
Jan. 2021 to Current
Guelph, Ontario
- Reduced AWS costs by 23%
- Responsible for maintaining and improving the project infrastructure and deployment
- Developed automated CD pipelines to validate that application code builds, is styled consistently, and passes unit tests
- Identified and optimized development processes that were allowing faulty Java code into production environments
- Converted manual infrastructure processes to use Terraform to create repeatable environments

Graduate Teaching Assistant – University of Guelph
Sept. 2019 to May 2021
Guelph, ON
- Teaching Assistant for the Microcomputers, Operating systems, Cloud computing, and Compilers courses
- Developed an automated grading harness to optimize the grading and feedback process

University of Guelph Mitacs Intern – Left
May 2019 to Aug. 2020
Maple Ridge, BC
- Conducting research on Mesh Networks and data storage with a team of industry developers, Master students, and a PhD candidate
- Wrote C++ simulator code for the ns-3 network simulator
- Successfully wrote and published an peer reviewed paper in the 2019 IEMCON IEEE conference proceedings

Research Assistant – University of Guelph
Jan. 2019 to Apr. 2019
Guelph, On
- Led development, integration, and testing of the web API for the eNuk environmental and health monitoring application
- Organized and facilitated weekly meetings
- Collaborated with external development team who was consuming our API
- Maintained and administered AWS EC2 and University servers and 3rd party resources for the project

› Projects

liquidctl
Oct. 2020 to Current
- Active maintainer for the cross-platform CLI and Python drivers for liquid coolers and other devices
- Reverse engineering USB and I2C/SMBUS protocols to control system hardware for linux machines that the original manufacturers do not provide support for
- Triaged issues and feature requests to determine the priority of their implementations
- Reviewed pull requests from community contributors before they are added to the codebase

eNuk
May 2018 to Jan. 2020
A community lead eco-health monitoring application for an Inuit community in Rigolet, Labrador using RightMesh as a method to try to help bridge the gap in the digital divide where there is very little infrastructure in place for digital communication in the community
- One of the lead developers on the project, responsible for deploying the web and cross platform mobile app
- Designed and developed the NodeJS based backend web server to ensure that the project can be extended and reused when the team changes

Botomir
Dec. 2020 to Current
- A Discord bot written with DiscordJS that is currently actively being used in several community servers
- An open source project developed to improve our skills and make useful add-ons to discords base functionality

› Education

University of Guelph   May 2019 to Mar. 2022
Masters Computer Science 2022
Distributed Systems: Wireless Mesh Networks
Received prestigious NSERC and OGS Scholarships

University of Guelph   Sept. 2015 to Apr. 2019
Bachelor of Computing, Honours 2019
Degree with Distinction Recognition for Outstanding Academic Performance

› Volunteering

System Administrator ·
Society of Computing and Information Science
Guelph, ON
Sept. 2018 to Apr. 2020
- Acquired servers and other hardware to setup a maker space for the Computer Science student body
- Managed and configured servers for various programming workshops and MLH Local Hack Day events
- Coordinated and lead several MLH Local Hack Day events
- Maintained various club cloud services and administrated several servers

› Skills

LANGUAGES: Javascript, BASH, Java, Python, C/C++, SQL, Latex
DATABASES: MongoDB, MySQL
FRAMEWORKS: ExpressJS, Spring Boot, ns-3
TOOLS: git, Github Actions, Bitbucket Pipelines, AWS, Terraform, Docker, Docker-Compose

› Awards

University of Guelph ·
Canada Graduate Scholarships–Master's Program
Apr. 2020
($17500) Natural Sciences and Engineering Research Council of Canada (NSERC) Scholarship

University of Guelph ·
Ontario Graduate Scholarship
Feb. 2020
($5000) A merit based academic scholarship

University of Guelph ·
Erin Angus Graduate Student Award
Apr. 2020
Awarded to a graduate student for making significant contributions to student life

University of Guelph ·
College of Engineering and Physical Sciences Society of Excellence
May 2019
Demonstrated academic excellence and outstanding contributions to the university community