Nicholas Josephson

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Technical Skills

Languages and Databases

- ●●●●○ Python
- ●●●●○ Swift
- ●●●●○ C/C++
- ●●●●○ Java
- ●●●○○ JavaScript
- ●●●○○ HTML & CSS
- ●●●○○ SQL
- ●●○○○ Prolog
- ●●○○○ Assembly

Technologies and Software

- Amazon Web Services
- iOS & Android Development
- OpenCV, Qt Framework, & Boost
- Git, Bash, Xcode, & IntelliJ
- macOS, Linux, & Windows

Design Concepts

- Agile & TD Development
- OO & MVC Design
- Distributed Systems

Extracurricular

Women in CS Member

University of Manitoba

A group of female and male students who support women in technology.

.devClub Member

University of Manitoba

A student developer club who meet to discuss tech and work on projects.

Recent Projects

BowlingSim for iOS

Developed a 3D bowling game for iOS using Swift and the SceneKit graphics framework.

BowlingSim.com

Worked in a group to develop a 3D bowling game using JavaScript and WebGL graphics libraries.

- Awarded the Most Learned award at an MLH Local Hackathon.

Experience

Software Developer (Co-op Work Term 2) **September 2018 – Present**

Invenia Technical Computing Corporation

- Architecting and developing a serverless implementation of a data scraping and parsing service for a cloud-based machine learning platform that uses big, high frequency data to optimize power grid operations in real time.
- Utilizing Python and various Amazon Web Services such as AWS Lambda, SQS, S3, CloudFormation CloudWatch, and Step Functions.

Software Developer (Co-op Work Term 1) **January – April 2018**

Innovations Team, Norima Consulting Inc.

- Created a cross-platform graphical user interface for a distributed scientific computing application using C++ and the Qt framework.
- Developed various components of the client-side application's business logic using C++14 and the boost library based on sprint stories/tasks.
- Investigated potential key technology and tool choices. Built proofs of concept for promising technologies in areas such as GUI frameworks, serialization of data, inter-process communication, and installers.
- Collaborated in stand up, sprint planning and sprint retrospective meetings, where the team discussed progress, created sub-tasks and established time estimates.

Undergraduate Researcher **May – August 2017**

Human-Computer Interaction Lab, University of Manitoba

- Initiated a project to prototype robot tele-operation interfaces for visually impaired drivers, to enable this population to benefit from tele-robotics.
- Created an iOS client application written in Swift that integrates with the API of a robot to access camera data and control the robot. The application is now being used in various other research studies.
- Developed a Java desktop application to remotely control the robot and display video from the camera on the robot by communicating with the client over a socket stream.
- Utilized various image processing techniques and the OpenCV library to manipulate the robot camera view to improve operability for those with vision impairments.
- Prepared and presented progress reports at weekly lab meetings, where the group asked questions of each other and shared ideas.

Education

Bachelor of Computer Science Honours (Co-op Option) **2015 – 2019**

University of Manitoba

- Working towards specializations in Theoretical Computer Science, Artificial Intelligence, and Networks & Security

Awards and Honours

Experience Award, NSERC **Winter 2018**

Undergraduate Research Award, University of Manitoba **Summer 2017**

Dean's Honour List, University of Manitoba **Fall 2016 – Present**

Employees Scholarship, University of Manitoba **Fall 2015 – Present**