

Diljot Singh Garcha

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TECHNICAL EXPERIENCE

Software Developer (Co-op Work Term 2) **09/2019 – 12/2019**
[D2L | Kitchener-Waterloo, ON](#)

D2L is a Canadian company specializing in E-Learning, creators of the Brightspace Learning Management System.

- Full-stack development of consumer-facing features for the unsurpassed Brightspace learning platform
- Produced an automation tool to ease perceptual difference testing of user interface components
- Implemented a Web API to streamline assignment hand-in process from student GitHub repositories

Software Developer (Co-op Work Term 1) **01/2019 – 04/2019**
[Invenia Technical Computing Corporation | Winnipeg, MB](#)

Invenia is a Software Company focused on optimizing the world's electrical grids to reduce the earth's carbon emissions.

- Architected new features for a data acquisition, parsing, and transformation system as part of a cloud-based machine learning platform that uses high-frequency data to optimize power grids
- Implemented features using Python and various Amazon Web Services including Lambda, DynamoDB, CloudFormation, SQS, SNS, and S3

Undergraduate Researcher

[Human-Robot Interaction Lab at University of Manitoba | Winnipeg, MB](#)

Ambivalent Sexism Theory: Impact on HRI **05/2018 – 08/2018**

- Conducted and coordinated Human-Robot Interaction studies using interfaces developed in Python and C# with over 90 participants

Flexible Avatar Models for In-The-Wild Robots **05/2017 – 08/2017**

- Developed an interface in Python for a telepresence robot to be controlled by a researcher for an In-The-Wild Social HRI study

PUBLICATIONS

“Good Robot Design or Machiavellian? An in-the-wild robot leveraging minimal knowledge of passersby’s culture”

[ACM/IEEE International Conference on HRI '19 | Third Author](#)

“Infrasound for HRI: A Robot Using Low-Frequency Vibrations to Impact How People Perceive its Actions”

[ACM/IEEE International Conference on HRI '19 | Third Author](#)

“Subliminal Priming in Human-Agent Interaction: Can Agents Use Single-Frame Visuals in Video Feeds to Shape User Perceptions?”

[ACM International Conference on HAI '18 | Third Author](#)

EDUCATION

Bachelor of Computer Science Honours (Co-op) **09/2016 – Present**
[University of Manitoba | Winnipeg, MB](#)

- Expected Graduation: April 2021, Cumulative GPA: 4.13/4.50
- Faculty of Science Undergraduate Research Award - 2017 & 2018
- Dean's Honour List - Fall 2016 to Present

TECHNICAL SKILLS

Languages

- Python
- JavaScript
- Java
- C / C++
- Assembly

Technologies

- Amazon Web Services (AWS)
- Flask & Serverless Dev
- Node.js & Express
- React & Redux
- Android & iOS Development
- Git, Linux, macOS & Windows

RECENT PROJECTS

Throne: Washroom Locator
[Group Academic Project](#)

- Web and mobile app that allows users to find nearby washrooms tailored for them

Flair: Web Server

[Individual Academic Project](#)

- Multi-threaded web server built from scratch that supports GET and POST requests

Wave Music Player

[Group Academic Project](#)

- Minimal and intuitive Android application for managing and playing music

Silverware: Ordering System

[Group Academic Project](#)

- Restaurant ordering system prototype build using jQuery, Bootstrap, and Featherlight

Resume Creator

[Group Side Project](#)

- Prototype application that creates a resume by parsing LinkedIn profile data
- Winner of the *Most Innovative Project Award* at MLH Local Hack Day