

Diljot Singh Garcha

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TECHNICAL EXPERIENCE

Software Developer 01/2021 – Present

D2L | Winnipeg, MB

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

- Designing and architecting an event scheduling system to automatically adjust student grades in response to due dates
- Full-stack development of features in instructor and student-facing content views within the Brightspace learning platform using C#, .NET, and LitElement

Software Developer, Co-op

D2L | Winnipeg, MB

D2L | Kitchener-Waterloo, ON

05/2020 – 08/2020

09/2019 – 12/2019

Software Developer, Co-op

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

- Implemented 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
- Developed features using Python and various Amazon Web Services including Lambda, DynamoDB, CloudFormation, SQS, SNS, and S3
- Created a tool to automate secret retrieval from 1Password to AWS

Undergraduate Researcher

Human-Robot Interaction Lab at University of Manitoba | Winnipeg, MB

Ambivalent Sexism Theory: Impact on HRI

05/2018 – 08/2018

Flexible Avatar Models for In-The-Wild Robots

05/2017 – 08/2017

- Developed interfaces to wizard various robots in Python and C#
- Conducted and coordinated HRI studies with over 90 participants

RECENT PROJECTS

Throne: Find, rate, and review washrooms 01/2020 – 04/2020

Group Project

- Lead the back-end development team using Python and Flask
- Implemented a REST API using AWS services such as, Lambda, Cognito and RDS
- Setup the continuous integration and deployment pipelines for the application using GitHub Actions
- Developed front-end features for the web and mobile applications using React and Swift

EDUCATION

Bachelor of Computer Science - Honours (Co-op) 09/2016 – 05/2021

University of Manitoba | Winnipeg, MB

- Cumulative GPA: 4.16 / 4.50
- Faculty of Science Undergraduate Research Award - 2017 & 2018
- Dean's Honour List - Fall 2016 to Summer 2019
- Minor in Philosophy

TECHNICAL SKILLS

Languages

- Python
- JavaScript
- Java / C#
- C / C++

Technologies

- Amazon Web Services (AWS)
- Flask & Serverless Dev (λ)
- Node.js & Express
- React & Redux
- Android & iOS Development

PUBLICATIONS

"Infrasound for HRI: A Robot Using Low-Frequency Vibrations to Impact How People Perceive its Actions" | HRI '19 | Second Author

"Good Robot Design or Machiavellian? An in-the-wild robot leveraging minimal knowledge of passersby's culture" | HRI '19 | Third Author

"Subliminal Priming in Human-Agent Interaction: Can Agents Use Single-Frame Visuals in Video Feeds to Shape User Perceptions?" | HAI '18 | Third Author

MORE PROJECTS

Flair: Web Server

Individual Project

- Multi-threaded web server built with Python that supports GET and POST requests

Wave Music Player

Group Project

- Minimal, intuitive and accessible Android application for managing and playing music

Silverware: Ordering System

Group Project

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

Resume Creator

Group Project

- Winner of the *Most Innovative Project Award* at MLH Local Hack Day