

Diljot Singh Garcha

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TECHNICAL EXPERIENCE

Software Engineer

02/2024 – Present

[Shopify | Winnipeg, MB](#)

Shopify is a Canadian e-commerce company that enables entrepreneurs to start or grow their business

- Developed back-end features using Ruby on Rails to drive merchant growth through monetary incentives
- Enhanced user-facing pages built with React to promote incentives
- Built and maintained unit/integration tests for reliability
- Contributed to code reviews with actionable feedback
- Regularly tested code to ensure optimal functionality and performance

Software Developer 2

01/2021 – 01/2024

[D2L | Winnipeg, MB](#)

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

- Designed and architected an event scheduling system to automatically adjust student grades in response to due dates using Amazon Web Services including Lambda, DynamoDB and SQS
- Maintained back-end APIs written using C# and .NET
- Wrote unit and integration tests to ensure complete test coverage of team-owned areas within the codebase
- Built a new learner focussed "New Tab Page" experience for Chromium-based browsers
- Created a prototype PDF document summarizer using Open AI

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](#)

- Led the back-end development team using Python and Flask
- Implemented a REST API using Amazon Web Services such as Lambda, Cognito and RDS
- Set up 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

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

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

Technologies

- Amazon Web Services (AWS)
- Flask & Serverless Dev (λ)
- Node.js, React, LitElement
- Ruby on Rails

PUBLICATIONS

[2023 | Int J of Soc Robotics](#)

Face to Face with a Sexist Robot: Investigating how women react to sexist robot behaviors

[2019 | HRI '19](#)

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

[2019 | HRI '19](#)

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

[2018 | HAI '18](#)

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

PROJECTS

MCU Countdown API

[Individual Project](#)

- Simple web app to showcase the power of AWS Lambda
- Received over 150 GitHub stars

Flair: Web Server

[Individual Project](#)

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

Resume Creator

[Group Project](#)

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