# Ratna Emani

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**Software Engineer · Application Developer · Consultant**

*3 years of combined work & co-op experience in analysis, design, development, & testing of software applications & products with excellent interpersonal & communications skills.*

ratnor.github.io

## EXPERIENCE

### CGI, Mississauga, ON — *Consultant/IoT Developer*

SEPTEMBER 2019 - PRESENT • 1 Year, 4 Months

*Role: Consultant*
*Client: The Source*

- Supported as a project lead on a Performance Testing Project for Black Friday.
- Collaborated with various teams and, analyzed, reported & proposed recommended action(s) based on the various testing/tuning cycles performed.
- We used various tools such as BlazeMeter, DynaTrace, Hybris Admin Console, JMeter & Google Analytics, to test & monitor performance improvements.

*Role: IoT Developer*
*Client: Bell*

- Conducted design thinking sessions with many stakeholders, to define a solution architecture of a "Connected Retail 360" to bring online shopping experience to in-store, based on Azure IoT Best Practices.
- Built using ESLs, Ultrasonic Sensors & Raspberry Pi 4/IoT Dev Kit to serve as an Edge device that communicates telemetry to the IoT Hub.
- The ultrasonic sensor connected to the Raspberry Pi 4 was controlled using a Python script, with the RPi.GPIO module library. The script calculated the relative distance and triggered an event accordingly.
- The event triggered by the IoT Hub would invoke an Azure Function (Node.js) which communicates with the ESL API to display the correct data (in-store).
- The entire event would be captured, stored (ComosDB) and used to derive insights using dashboards (PowerBI).
- Reviewed our architecture with Azure Architects to plan & develop a smart retail prototype.
- Responsible for tracking project progress, conflict resolution(s), milestones and budget.
- Pitched the Connected Retail Experience as part of the Bell BU IoT CoE Team.

### MC Master of Ceremony, New York, NY — *Chief Information Officer*

NOVEMBER 2019 - OCTOBER 2020 • 1 Year

- My tasks involved making decisions in the architecture design of the technical stack through R&D, on-boarding & management of the team members, engaging daily with team developers, in a part-time capacity.
- Using Agile methodology the application was developed on AWS, using the micro-services architecture, we used React Native to develop the mobile app, and React for the web application front-end and used Lambda functions (Node.js) for the back-end with both DynamoDB and SQL DBs.

## SKILLS

**Languages**: JS/HTML5/CSS, Java & Python

**IDEs & Editors:** Eclipse, VS Code, IDLE, Android Studio

**Tools & Platforms:** JIRA, Confluence, Azure TFS, Azure IoT Suite (Azure CLI, IoT Hub, IoT Edge, Stream Analytics, Azure Functions, Cosmos DB), Postman, AWS (AWS CLI, Amazon EC2, Amazon RDS, S3), Docker

**Other Technologies:** Git (CodeCommit, Bitbucket, GitHub, GitLab), Glitch

## LANGUAGES

English
Telugu
Hindi

## CGI, Thornhill, ON — *RPA Developer (Co-op)*

MAY 2017 - OCTOBER 2017 • 6 Months

- Performed acceptance testing of various RPA applications and tools to identify & assess the tradeoffs.
- Participated in various discussions with RPA Vendors (i.e. Blue Prism, UiPath & WorkFusion).

## CIBC, North York, ON — Intermediate *Application Developer (Co-op)*

MAY 2016 – APRIL 2017 • 1 Year

- Using the BRD and the team lead's guidance, implemented full stack modifications to Rich client application tools (i.e. Client Notebook & Investment Planning) in Java.
- In the final phases of the project life cycle, worked closely with the QC & DTS teams during SIT & UAT cycles.

## CIBC, North York, ON — Intermediate *Application Developer (Co-op)*

MAY 2015 – AUGUST 2015 • 4 Months

- First experience working in an enterprise software development environment. Implemented minor front-end modifications on a legacy application using Java.
- Participated in code reviews, and used HP ALM to track issues during DIT/SIT.

### EDUCATION

## The Hong Kong University of Science & Technology, Coursera (Online) — *Full-Stack Web Development with React Specialization*

SEPTEMBER 2020 - PRESENT

This is a four month specialization program that covers Front-End Web Development with React (& Bootstrap 4), Multiplatform Mobile App Development with React Native and Server-side Development with NodeJS, Express & MongoDB

## McMaster University, Hamilton, Ontario — *Bachelor of Engineering*

SEPTEMBER 2013 - APRIL 2019

Completed my bachelors with the Deans' Honour List. Showed excellent understanding in a wide range engineering courses such as Software Design & Software Testing, Computer Networks & Security & Real-Time Systems

### PROJECTS

## Vulnerability App (VApp) — *Capstone Project*

- Design a web application to retrieve (with permission) & assess (give a score) the state of the user's privacy settings.
- Front-end on Vue.js & back-end using Node.js & MySQL server.

## NSS Canada Website Redevelopment — *NGO/Part-Time*

- Redesign & redevelopment of a WordPress website with new features such as accepting donations using PayPal (& Visa).
- Custom back-end plugin modifications using PHP & MySQL.
- Custom front-end modifications made using JS, JQuery & CSS.