# Ryan Fleck

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## EDUCATION

### UNIVERSITY OF OTTAWA – BASc COMPUTER ENGINEERING

- Graduated April 2021 with multiple job offers, accepted a role with IBM Consulting
- Member of several organizations and technical clubs (see Volunteering section)

## EXPERIENCE

### IBM – SENIOR TECHNICAL CONSULTANT – MAXIMO                   JULY 2021 – PRESENT (3Y)

- Managed a small team to architect and implement a multi-tenant, multi-environment cloud pipeline utilizing Azure Data Factory and other cloud-native components
- Manage the cloud migration of a critical engineering application from Citrix to Azure
- Promoted from Associate to Senior Technical Consultant in July 2023
- Customize IBM Maximo EAM solutions for industrial/private and public sector clients
- Create internal tools to streamline the delivery of status updates and documentation
- Responsible for Jira boards for multiple developers, and deliver clear status updates to project manager and clients

### WISE ASSISTANT – BACKEND ENGINEER                   JUNE 2020 – JUNE 2021 (1Y)

- Implemented features for the Wise Assistant backend (Django) and frontend (React)
- Used Django Rest Framework to write secure model serializers for frontend usage
- Adapted multiple third-party authentication libraries to a custom user model
- Implemented pipelines for profile image upload, processing, and storage in AWS S3
- Called the SendGrid API to send account verification and password reset emails
- Built beautiful, complex components and features for the React web app
- Implemented a websocket microservice in Node.js for realtime client synchronization
- Implemented a hugo static site for company marketing with backend integrations
- Leveraged docker to manage the team's development environment, adding additional services and databases to the docker-compose file

### IBM – EXTREME BLUE TECHNICAL INTERN                   SUMMER 2019 (4MO)

- Prototyped a tool to replace deprecated libraries within compiled Java EE binaries
- Used Javassist to manipulate bytecode, wrote algorithms to update class functions
- Architected a transformation-rule organization system using the reflections library
- Created team development workflow with docker, shell & python scripts, Travis CI

### MNP LLP – CO-OP DEVELOPER                   JANUARY 2018 – DECEMBER 2018 (1Y)

- Spoke directly with MNP clients to investigate and address reported bugs
- Wrote (in team of three) a replacement Drupal backend for an internal SiteCore CMS
- Developed features, fixed bugs in a client's Teamsite (Java EE/Spring) CMS
- Wrote technical and user documentation for a client's CMS created with SiteCore
- Wrote AEM HTL/JSP components, configured workflow & security for bid prototype

# Volunteering

**IEEE uOttawa** – Webmaster                                        September 2019 – Present

- Responsible for maintaining ieeeuottawa.ca and associated stores/web services
- Implemented a "VR Campus" page where remote students could browse a series of 360° photos of the Engineering faculty buildings
- Created and managed an open-source Discord Bot for the Engineering Discord server.
- Implemented a brand new voting web applications designed for IEEE uOttawa and ESS elections – read more here: ryanfleck.ca/2021/uottawa-student-elections-2021

**UO Supermileage** – Motor Controller Developer        September 2019 – Present

- Responsible for re-writing the embedded brushless DC motor controller code using C
- In a team of two, updated code from polling to interrupt-based sensor reading
- Manage the website redesign team, migrate to the Hugo static site generator
- Used deep knowledge of the CPU to dramatically increase the processor clock speed and improve system response time – see ryanfleck.ca/2020/msp430-timer

**Xalgorithms Foundation** – Developer/Contributor        April 2018 – Present

- Implemented a prototype React application to test a potential method of rule writing
- Wrote unit tests in Scala for a core system component, the open source rule interpreter
- Tested the rule parser against sample rules, proposed improvements, reported bugs
- Implemented an Electron/React desktop file editor for .xa rule files

**KJC Code Club** – Instructor                                    November 2021 – Present

- Taught groups of 10 children over WebEx aged 10-16 programming fundamentals
- Assisted other instructors in some sessions, answering questions and running the chat
- Showcased the students' results internally while working at IBM

# Projects

- Democracy – Web app to run elections for uOttawa Engineering orgs. Django/React
- Influx TMS – Team Management System written for SEG3102 course with Django
- Socket.IO Trivia – Developed a UX trivia webapp in Express with scoreboard & chat
- Telegram Chat-Bots – Using Python and NodeJS, wrote bots to respond to key words from friends, query Wolfram Alpha, and provide tools for running D&D games in-chat
- Games – Numerous 1-4 player experimental demos in Godot, Unity, Unreal, Phaser
- Slack BusBot – In a team of two, wrote a Slack chat-bot using the OC-Transpo API

# Technology

I am familiar with the following technology, and can utilize test-driven design with industry standard design patterns and tools to create and deploy secure business applications.

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|---|---|---|---|---|---|---|---|---|
| Clojure | Java EE | Python | C# | .NET | NodeJS | HTML | CSS | JavaScript |
| Redis | React | TypeScript | Scheme | APIs | Swagger | Traefik | Nginx | Cloudflare |
| C | C++ | Arduino | Ruby | XML | JSON | REST | SOAP | PostgreSQL |
| JUnit | Jest | Android | WS | PHP | Spring | Mongo | Scala | HC12 ASM |
| Docker | Hugo | Jekyll | Go | XSL | Heroku | SEO | SQL | LaTeX |