

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 – ASSOCIATE TECHNICAL CONSULTANT – MAXIMO JULY 2021 – PRESENT

- Customize IBM Maximo EAM solutions for industrial/private and public sector clients
- Apply development expertise to architect and implement solutions to client problems
- 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 ieeuottawa.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.

Python	Java	Java EE	C#	.NET	Razor	HTML	CSS	JavaScript
Redis	React	TypeScript	Netlify	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	L ^A T _E X