Ryan Fleck

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EDUCATION

UNIVERSITY OF OTTAWA – BASc COMPUTER ENGINEERING

- Consecutive Dean's Honor List and Merit Scholarship for high academic standing
- Member of electric car (supermileage) team, IEEE uOttawa, and other technical clubs
- Graduated April 2021 and accepted a role with IBM Consulting in Calgary, AB

EXPERIENCE

IBM – SENIOR DATA ENGINEER   JULY 2021 – PRESENT (5Y)

- Standardize data pipelines in Snowflake for a large analytics modernization program
- Responsible for config, CD, and monitoring of critical python programs on RHEL
- Led implementation of a CDC database sync tool from DB2 to Snowflake, team of 3
- Managed a small team to architect and implement a multi-tenant, multi-environment cloud pipeline utilizing Azure Data Factory, Functions, and on-prem components
- Promoted from Associate Developer to Senior Technical Consultant in July 2023
- Migrate a critical O&G instrumentation application from Citrix to Azure AVDs
- Develop custom functionality for IBM Maximo EAM forms and automations with JS

WISE ASSISTANT – FULL-STACK WEB DEVELOPER   JUNE 2020 – JUNE 2021 (1Y)

- Responsible for developing features for the backend (Django) and frontend (React)
- Used Django Rest Framework to write secure model serializers for frontend usage
- Implemented pipelines for profile image upload, validation, resizing, and storage in S3
- Utilized SendGrid to send beautiful account verification and password reset emails
- Designed and implemented client synchronization with a websocket microservice

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
- Recieved elite presentation training and flown to New York to pitch to IBM executives

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

- Responsible for enhancing Drupal, Teamsite, and SiteCore enterprise CMS systems
- Worked directly with MNP clients to facilitate issue diagnosis and resolution
- Developed with AEM HTL/JSP, Java EE/Spring, .NET C# and Razor templates

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

- Observer – Agentic headline analysis of 20k news items/day. Clojure/PGVector/HTMX
- 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.

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