

# Ricky Fan

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## EDUCATION

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### McMaster University

*Bachelor of Applied Science in Computer Science*

Hamilton, ON

*Sept. 2019 – Present*

## EXPERIENCE

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### Software Developer Intern

May 2023 – Present

*BlackBerry QNX*

*Ottawa, ON*

- Learned about safety certified, POSIX compliant, microkernel RTOS – QNX. Experienced with interrupts, virtual memory and thread implementation on freestanding x86 architecture
- Developed a QNX internal PyPi package by leveraging JIRA and Jenkins APIs to automate change log request process. Further optimized the module's runtime by utilizing multithreading techniques to enable multiple concurrent request processes

### Software Developer Intern

Sept 2022 – April 2023

*GEOTAB*

*Oakville, ON*

- Debugged and fixed parallel tests failure due to race condition with mutex lock in C#, reduced test failure by 98%
- Refactored gRPC code in C# to improve maintainability and testability, wrote unit tests using mocks/stubs to achieve 100% test coverage
- Developed and maintained an automated pipeline tool to deploy test rigs by leveraging GitLab CI, Terraform, Kubernetes, Helm, and GKE
- Developed a CLI application using C# to deploy Terraform modules, perform health check and generate test report on Gateway test servers

### Software Engineer Intern

June 2022 – Aug 2022

*Publicis Sapient*

*Toronto, ON*

- Developed an AI chatbot for a leading US telecommunication company using React, DialogFlow, and Java Spring Boot with microservice architecture
- Developed two client – side microservices to query responses from DialogFlow AI agent, and handle SMS messaging (via Twilio API) for scheduled callback requests
- Integrated MySQL database with Spring Boot to store client information and scheduled request details

### Software Developer Intern

Jan 2022 – April 2022

*CIBC*

*Toronto, ON*

- Built an automation tool using Python (pandas) to track and validate server jobs migration from AutoSys R11.0 and MOA to AutoSys R11.36
- Documented the automation tool with Module Interface Specification (MIS), utilized Model View Controller (MVC) design pattern, unit testing done with pytest

## PROJECTS

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### Th3rdplace

Feb 2021 – Aug 2022

- Built customised Docker images to containerize client and server applications, enabling the app to run on local, staging and production environments
- Developed a CI/CD pipeline in GitLab by integrating Cloud Build, Cloud Run and Firebase Hosting
- Configured and deploy CRON job with Cloud Function and Cloud Scheduler to enable weekly database backup

### LiftJoint

May 2020 – Aug 2020

- Developed a full-stack web application using Django serving REST API and with React as the frontend
- Client-side state management handled using Redux, used Bootstrap for responsive web design
- Configured token – based authentication to ensure high security and OAuth2 authentication for third party login
- Deployed the application on Digital Ocean, and configured a reverse proxy server using Nginx

## TECHNICAL SKILLS

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**Languages:** C#, Java, Python, C/C++, Bash, JavaScript, Haskell, HTML

**Database/Frameworks/Tools:** Firebase, MySQL, Bootstrap, Node.js, React, Redux, .Net, Django, Git, CSS, Flutter, pandas, Docker, GCP, Spring Boot, GitLab CI, Terraform