

# Yufei Cui

SOFTWARE ENGINEER · MACHINE LEARNING

Greater Seattle Area

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## Experience

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### Amazon

BACKEND DEVELOPMENT ENGINEER INTERN ON FULFILL TO PROMISE (F2P)

May. 2020 - Aug. 2020

- Amazon Supply Chain Optimization Technologies - Fulfill to Promise (SCOT - F2P) focuses on finding the most efficient solution(s) that fulfills Amazon's promise (e.g., Amazon Prime One-Day Delivery) to its customers worldwide
- Implemented and applied the **Monte Carlo Tree Search** (MCTS) AI algorithm to generate candidate solutions given warehouse inventory, delivery date, options and cost, etc.
- Built a working version in Java that produces solutions with better or equal pricing compared to production (more than 80% of the time) on a subset of NA & EU orders
- Created relevant metrics to enable monitoring and data collection
- Created documentation for MCTS and its application in F2P to enable future expansion of the project

### IBM

FRONTEND DEVELOPMENT INTERN ON IBM CLOUD AUTOMATION MANAGER (CAM)

May. 2018 - Aug. 2019

- Implemented and updated new UI designs with HTML5, AngularJS, & SASS/CSS to maintain an aesthetically pleasing UI
- Incorporated Content Security Policy (CSP) in Node.js to enhance client-side resistance to cross-site scripting (XSS) attacks
- Followed Web Content Accessibility Guidelines (WCAG) to create and maintain an accessibility compliant web application
- **General Data Protection Regulation** (GDPR) compliance implementation and testing to support IBM's commitment to user data privacy
- Performed security, performance, and accessibility QA automation to ensure product integrity and enhance user experience

### Leonardo Worldwide Corporation

QA ANALYST & JUNIOR DEVELOPER INTERN

Apr. 2017 - Dec. 2017

- Designed, implemented, and maintained manual and automated QA tests with tools such as SOAP UI, Postman, Splunk, As-sertible, etc., to ensure the quality and reliability of Leonardo's solutions
- Developed and tested projects using AWS microservices to create cheap, robust, and scalable solutions
- Adequate with provisioning and configuring Virtual Machines and Docker Containers with Vagrant, Puppet, Terraform, etc.
- Trained and on-boarded new incoming interns with technical presentations

### University of Toronto

TEACHING ASSISTANT - COMPUTER SCIENCE, DISCRETE MATH, DATA STRUCTURES, COMPLEXITY

Jan. 2017 - Apr. 2021

- Held review seminars for more than 300 students by revising key topics with examples for midterm and final examinations
- Led breakout groups during lectures to help engage students by providing relevant examples, questions, and surveys
- Created a personal website to distribute homework, quizzes, assignments, and feedback
  - \* <http://individual.utoronto.ca/cuiyufei>
- Taught foundational topics such as UML, OOP, memory model, data structures & algorithms, recursion, complexity, etc.

## Education

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### University of Toronto

Toronto, Ontario

HONS. BSC IN COMPUTER SCIENCE, SOFTWARE ENGINEERING SPECIALIST, CO-OP

Sept. 2015 - Dec. 2020

- Graduated with *High Distinction*
- Minor in statistics
- GPA: 3.82 out of 4.0

## Skills

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### TECHNICAL

- Proficient with **Java**, **Python**, **C**, **C++**, **Node.js**, etc. to solve problems with algorithms & data structures, UML's, and application of software design principles
- Experienced with using **Python** and **R** to make machine learning models and perform statistical analysis
- Proficient in Unix/Linux environments to carry out system level tasks competently
- Experienced with working professionally in agile software development processes
- Makes clear and concise documentations/presentations to facilitate knowledge transfers