

# Justin Xu



xujustinj



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justinxu.me



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## EDUCATION

### University of Waterloo – Computer Science, Thesis Program (current)

Waterloo, ON

Master of Mathematics // artificial intelligence, information extraction, knowledge graphs

Sep 2023 – May 2026

- supervised by Professor Pascal Poupart
- 95.75% cumulative GPA
- developed data augmentation and consistency training techniques for information extraction
- formalized a task definition of information extraction for the generative language model paradigm, and gathered a large benchmark to evaluate new state-of-the-art techniques

### University of Waterloo – Computer Science, Honours, Co-operative Program

Waterloo, ON

Bachelor of Computer Science, Artificial Intelligence Specialization, Statistics Minor

Sep 2018 – Apr 2023

- 94.75% cumulative GPA (Dean's Honours)


## EXPERIENCE

### AceTeam – Senior Software Engineer (current)

(remote) Hamilton, ON

AI Platforms // agentic workflows, information extraction, Python, Next.js, PostgreSQL

Apr 2025 – present


- directly interfaced with key customers to deliver solutions in multiple projects in a fast-paced startup
- fully architected and implemented a visual workflow editor from scratch, including support for arbitrary user-defined nodes, strongly-typed data validation, and human-in-the-loop review 
- led product hardening and testing initiatives to close the gap between vite coding and production
- supported research on calibrated confidence estimation for information extraction

### Waabi – Research Intern

Toronto, ON

Autonomous Driving // adversarial machine learning, Bayesian optimization, PyTorch

Sep 2022 – Dec 2022

- augmented a pipeline to simulate safety-critical scenarios for testing and training self-driving agents
- experimented with black-box optimization techniques to demonstrate a novel traffic behaviour model's ability to generate realistic adversarial scenarios, published in CVPR 2023 as 3<sup>rd</sup> author 

### Amazon – Software Development Engineer Intern

Vancouver, BC

E-Commerce // Java, TypeScript, React, AWS Lambda, Amazon API Gateway, Dagger, JUnit

May 2022 – Aug 2022

- streamlined a complex and time-consuming debugging process by building a centralized tool that looks up customer data and generates distributed trace trees in a single click
- greatly increased the reusability of an AWS Lambda function by implementing an interpreter that consumes configurations expressed in a custom functional fully-typed programming language

### Alloy – Software Developer Intern

Vancouver, BC

Supply Chain Analytics // Java, TypeScript, Python, PostgreSQL, React, JUnit, pandas

Sep 2021 – Dec 2021


- unblocked a major data migration by efficiently implementing a record-matching graph algorithm

### FairVentures Lab – Solutions Developer

(remote) Kitchener, ON

Insurtech // Python, TypeScript, Bash, Apache Airflow, Docker, GraphQL, React

Jan 2021 – Apr 2021

- built and demoed open-source artificial intelligence assistants for the insurtech industry 
- redesigned post-processing to eliminate almost all false positives from a PDF text extraction workflow

### Loo Labs – Backend Team Lead

(remote) Waterloo, ON

Student Development Team // TypeScript, CSS, PostgreSQL, Next.js, Express.js, Docker, Figma

Sep 2020 – Aug 2021

### Wish – Full Stack Software Engineer Intern

(remote) Toronto, ON

E-Commerce // Python, TypeScript, SQL, MongoDB, GraphQL, React, Grafana

May 2020 – Aug 2020

### Osellus (now Leap9) – Mobile Software Developer

Toronto, ON

Microlearning Software // Swift, Kotlin, SQL, iOS, Android

May 2020 – Aug 2020