

# Benjamin Chislett

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<https://github.com/benchislett>

## Profile

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Computer Science student with a thirst for knowledge. Skilled programmer with experience in parallel computing, machine learning, full-stack development, research, and computer graphics.

## Experience

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### Research Intern

May 2021 - Sep 2021

*EcoSystem Research Lab, University of Toronto*

- Researched and implemented techniques for highly performant machine learning code generation
- Received NSERC Undergraduate Student Research Award (USRA) funding

### Machine Learning Engineer

Apr 2021 - Aug 2021

*ActiveLoop AI, California (Remote)*

- Designed and developed infrastructure for a cloud machine learning data platform in Python

### Software Developer

Sep 2018 - Jul 2019, May 2020 - Dec 2020

*Mysa Smart Thermostats, St. John's, NL*

- Maintained and rewrote a full-stack TypeScript application used to investigate user accounts distributed over an AWS backend
- Authored a suite of libraries for interacting with AWS at multiple tiers of abstraction
- Developed various new features for a React-Native mobile application
- Architected a data pipeline used to create a data lake and perform analytics using IaC and SQL
- Led a small team of developers to create an IoT-based device simulator

### Research Intern

Jul 2019 - Sep 2019

*Okinawa Institute of Science and Technology, Okinawa Prefecture, Japan*

- Researched the Compressive Split-Step Fourier Method for efficiently solving the Gross-Pitaevskii equation
- Maintained GPUE: a CUDA/C++ application for simulating Bose-Einstein condensates
- Authored GPUE.jl: a JuliaLang-GPU implementation of GPUE

## Projects

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### GPU-Accelerated Ray Tracer

- Applied data-oriented design and GPU programming principles to develop an accelerated path tracer in CUDA with support for photorealistic materials and models
- Implemented SOTA techniques for GPU-accelerated Real-Time Ray Tracing

## Education

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### Honours Bachelor of Science, Computer Science

Sep 2019 - May 2023 (05/23)

*University of Toronto, Scarborough, ON*

- Cumulative GPA: 3.96
- Teaching assistant for CSCB36, Fall 2021
- Teaching assistant for MATA22 and CSCA48, Winter 2020/21
- ICPC North America Finalist, 2020/21