Benjamin Chislett

benjamin.chislett@mail.utoronto.ca
https://github.com/benchislett

Profile

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

Key Skills: JS/TS | C++ | Python | AWS | GPU Computing & HPC | Machine Learning | Agile

Experience

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
- 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

GPU-Accelerated Ray Tracer
- Read over 100 papers on real-time ray tracing on the GPU
- Designed and implemented an accelerated path tracer in CUDA with support for arbitrary meshes, BSDF materials, various light sources, and more

Convolutional Autoencoders for Image Compression
- Researched machine-learning and computer vision techniques
- Developed a novel image compression algorithm using convolutional autoencoders and data compression

Chess Engine
- Developed and optimized a high-performance chess engine in C++

Education

Honours Bachelor of Science, Computer Science *Sep 2019 - Present*
University of Toronto, Scarborough, ON
- Cumulative GPA: 4.00