

Frank Ding

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Education

University of Waterloo

Expected May 2022

Bachelor of Mathematics, Double Major in Computer Science & Statistics

Waterloo, ON

- 4.00/4.00 cumulative GPA, 96.2% CS average, 94.8% Statistics average
- Coursework: Algorithms, Data Structures, Operating Systems, Computer Networks, Machine Learning, Artificial Intelligence, Linear Models, Sampling, Forecasting (F20), Simulation (F20), Graph Theory

Experience

A

May 2021 – Aug 2021

Software Engineer Intern, A

A

- A
- A
- A

Snowflake Inc.

Jan 2021 – Apr 2021

Software Engineer Intern, Query Engine

San Mateo, CA

- A
- A
- A
- A
- Implemented modulo and division operators which are 3-4x faster than x86 div using C++

Citadel Securities

Jan 2020 – Mar 2020

Software Engineer Intern, Low Latency

Chicago, IL

- Developed and productionized infrastructure to add multi-hardware support to options trading libraries running in FPGA-based trading systems, using C++ template meta-programming
- Improved the robustness and functionality of the testing framework for packet retransmission via FPGAs to exchanges using C++, Boost.Asio, gtest

SideFX Software

May 2019 – Aug 2019

Software Engineer Intern, R&D

Toronto, ON

- Designed and built tools to allow artists to interactively deform and re-shape 3D geometric models in Houdini, an animation and VFX application, using C++ and Python; shipped in the 2019 major product release

Research and Activities

University of Waterloo

Sept 2020 – Dec 2020

Undergraduate Research Assistant, Programming Languages Group

Waterloo, ON

- Investigated a pluggable type system for Java allowing expressive units of measurement types and methods of inference and annotation for these types with Dr. Werner Dietl
- Created code generation tools in Python for micro-benchmarking the solving time of various inference and annotation tasks; deduced trends and relationships using these tools

Facial Expression Recognition

- Wrote a survey paper comparing deep-learning methods for classifying emotions in faces against conventional approaches involving handcrafted features
- Implemented algorithms from several papers using Keras, NumPy, and sklearn

Technical Skills

Languages/Tools: C++, C, Python, Java, Bash, R, Assembly, Git, GDB, Bazel, Linux, macOS