

WEIXUAN YANG

Master student in Computer Engineering

EDUCATION

Master of Engineering in Computer Engineering
University of Toronto

CGPA: 4.00

Sep 2021 - Present
Toronto, ON, Canada

Bachelor of Engineering in Electrical Engineering
Dalhousie University

CGPA: 3.86, Sexton Distinction, Sexton Scholar

Sep 2016 - Apr 2021
Halifax, NS, Canada

PROFESSIONAL EXPERIENCE

Reliability Co-op Electrical Engineering Student
Michelin North America Inc.

Automation design, Electrical design, PLC programming

Sep 2019 — Mar 2020
Bridgewater, NS, Canada

Co-op Embedded System Designer
KingStar Geophysical Prospect Equipment Ltd.

Embedded system programming, Mixed-signal PCB design, GUI design

Jan 2019 — Apr 2019
Baoding, Hebei, China

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Toronto, ON, M4P 0E4, Canada

[LinkedIn](#) | [GitHub](#)

SKILLS

C / C++

(STL, pthreads, Boost)

JavaScript / HTML / CSS

(Node, React, jQuery, Bootstrap)

Python

(Pandas, TensorFlow, PyTorch)

Git, MySQL, Java, R, Solidity

RECENT PROJECTS

Simple Pet Shop: An Ethereum Decentralized Application

- Used Solidity, Node.js, Web3.js, and Bootstrap to develop a full-stack decentralized shopping application.
- Implemented multiple advanced features and provided backend interfaces for several add-on features.
- The application achieved blockchain-wide real-time data display and response by on-chain event listening.

ctFS-FL: A Fine-grained Lock For Persistent Memory File System

- Designed a scalable byte-range synchronization mechanism for Persistent Memory file systems.
- Used C to develop a mechanism prototype, C++ and Python to build a benchmark set for prototype evaluation.
- The prototype efficiently exploited parallelism to speed up data access while ensuring fairness and low latency.

A Branch-and-Bound MAX-SAT Solver

- Used C++ to develop a maximum satisfiability problem (MAX-SAT) solving application.
- Implemented a depth-first Branch-and-Bound algorithm to solve the standard and weighted MAX-SAT.
- The application guaranteed to find optimal solutions rapidly by employing a multivariable bounding function.

A Flow-Based Spreading Analytical Placer

- Used C++ to develop an application to solve the placement problems on IC synthesis.
- Utilized convex function to model the problems and conjugate gradient method to obtain the solutions.
- The application deployed a flow-based algorithm analytically to optimize the solutions under constraints.

A Maze Router

- Used C++ to develop an FPGA maze routing application.
- Adopted Lee algorithm, modelled the problem as a directed graph and used BFS to find the optimal solutions.
- The application applied a simulated annealing algorithm to minimize delay and hardware cost of the solutions.