

Daniel Fang

Computer Science 2A

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Portfolio Website: <https://daniel-zm-fang.github.io/Portfolio-Website/>

Github: <https://github.com/daniel-zm-fang>

Skills Summary

- **Languages:** C, C++, Python, Java, HTML/CSS, R, Racket
 - Experienced with Object-Oriented design, learned through various courses and projects
- **Tools:** Linux, VS Code, Git, Vim, VirtualBox, Excel

Projects

Linear Algebra Toolkit (C)

- Implemented a vast library of computational tools based on an entire university course (MATH 136)
- Clients can create abstract data types such as vectors and matrices to perform complex calculations
- Designed three layers of abstraction to maximize the cohesion and minimize the coupling of each module
- Notable functionalities: perform Gauss-Jordan Elimination and calculate the determinant of **any** matrices
- Link: <https://github.com/daniel-zm-fang/Linear-Algebra-Tools>

Image Processing Program (Java)

- Implemented an array of image editings tools and an intuitive UI using the Processing 3 library as a lite alternative to Photoshop
- Designed each tool using the Object-Oriented paradigm to allow easy client customizations
- Notable functionalities: pixel sorting, crop, apply filters and draw on the image
- Link: <https://github.com/daniel-zm-fang/High-school/tree/master/Processing%20Experiments/Pixelcell>

Experience

UWaterloo IT Advisory Board

Jan 2020 - Mar 2020

Team Member

- Collaborated with other team members provide constructive feedback on the university's IT services, including WaterlooWorks and LEARN
- Tested beta versions of university websites before the public releases
- Updated the documentation on how to set up the University WiFi for incoming students

Alcohol Countermeasure System

July 2017 - Aug 2017

July 2018 - Aug 2018

Inventory Control Assistant

- Used SAP inventory management module to monitor inventory levels
- Actively communicated with the production team to ensure customer satisfaction and production deadlines were met
- Optimized the layout of the warehouse by organizing inventory by their request frequency, leading to increased productivity

Mississauga Italian Canadian Benevolent Association

Mar 2018 - Apr 2019

Computer Mentor

- Designed and hosted weekly computer classes for seniors at a senior residence
- Offered personalized teaching to help seniors at their own pace
- Received many positive feedbacks from the seniors

Education

University of Waterloo

2019 - 2024

Candidate for Bachelor in Computer Science

Cumulative Average: 3.7 (84%)

Relevant courses: Object-Oriented Software Development, Elementary Algorithm Design and Data Abstraction, Designing Functional Programs, Introduction to Probability Models