

CONTACT

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SKILLS

Languages

C/C++ | Java | HTML | CSS
SQL | R | Python | Verilog

Tools/Technologies

Git | UNIX | Bash | Eclipse | VSC
SQL Server | IBM DB2 | MySQL
Windows | IOS | Microsoft Office
Excel | VBA | Power BI | MATLAB

Methodologies

Agile | Scrum | SDLC | PMO

PROJECTS

Data Structures/Algorithms (C++).

- Implemented with minimal runtime/cost:
- (De)Queue (Linked List), Hash Table, Quadtree, Minimum Spanning Tree (Kruskal), (Un)Directed Graph (Dijkstra).

Sys. Programming/Concurrency (C).

- Developed multi-threaded web crawler to cURL image strips utilizing IPC shared memory queue (producer-consumer)
- Reconstructed image using hexdump.

Real-Time Operating Systems (C).

- Implemented a real-time task scheduler supporting aperiodic (preemptive priority) and periodic (EDF) tasks.
- Supports inter-task communication using mailboxes (blocks task when full).
- Task and mailbox memory allocated w/ Binary buddy system.

Operational Database (C++).

- Takes user or .csv input, outputs to file or console, can sort/search (self-teaching)

Personal Website (HTML/CSS).

- Simple portfolio website (self-teaching)

AWARDS

College Board AP Exams

AP Physics 1 - Level 4

AP Calculus AB - Level 4

UWaterloo Math Contests

Euclid - Top 25%

Galois - Top 25%

Cayley - Top 25%

CIMC - Top 25%

TONY SHEN

BASC 2023 - HONOURS COMPUTER ENGINEERING - 3B

EXPERIENCE

Business Systems Analyst

TD Securities | Jan 2021 - Apr 2021

- Agile team environment for **reference data** application, used JIRA for monthly sprints (new security reference data/fields, app maintenance, adhoc requests, etc.)
- Oversaw sprint end-to-end: requirement gathering (JIRA upkeep), development, **SIT/PAT testing** (below), deployment (**change management**), sprint retrospective
- Wrote SQL (SSMS) queries to verify TD data tables include new fields (SIT)
- Analyzed JSON response from **Postman API** and application GUI to verify downstream consumers have access to all new information (PAT)
- Remediated internal excel sheets by consolidating with **Bloomberg Terminal**

Access/Monitoring and Support Analyst

TD Bank | Sep 2019 - Dec 2019

- Innovative Automation (IA): leverage **Blue Prism RPA** to automate repeatable business tasks with digital workers (DW) executing keystrokes on machines
- Wrote Process Design Document (PDD), map business task to automated keystrokes
- Used Blue Prism to create/maintain/troubleshoot **process schedules** (run tasks)
- Wrote **process flow documentation** for automated password resets (exceptions)
- Reduce the number of resets required by **19%** through first month
- Performed **root cause analysis** with developers/testers to resolve PROD issues
- Managed project documentation: **Gantt charts**, project dashboards, DW lookup

Information Security Analyst

Home Trust Company | Jan 2019 - Apr 2019

- Project Lead for **Crowdsourced AI POC**: coordinated Legal, Compliance, ERM, InfoSec, Data Governance teams using project docs (Gantt charts, SOW, risk ass.)
- Wrote SQL (SSMS) queries to pull datasets from warehouse, then remediated poor data using Excel functions: **VLOOKUP**, pivot tables/reporting, VBA & macros
- Increased company employee cybersecurity awareness by **24%** over first month
- Presented monthly security event summary to execs, featuring KPIs (with trends and outliers) gathered from IBM QRadar SIEM, Symantec EPP, ServiceNow
- Monthly role owner attestation (**ServiceNow**), weekly SAP audit (**SAP NetWeaver**)

Cashier/Drive Thru Customer Service

Tim Hortons | Aug 2017 - Aug 2018

- Developed strong **client-facing aptitude** and customer service expertise
- Worked in a large team environment to **exceed** service and cleanliness standards

EDUCATION

University of Waterloo

Waterloo, Ontario, Canada | Sep 2018 - Present

- Candidate for Bachelor of Applied Science 2023 - **3B Honors Computer Engineering**
- Data Structures and Algorithms | Database Systems | Probability Theory & Stats
Systems Programming & Concurrency | Real-Time Operating Systems | Compilers
Advanced Calculus | Digital Hardware Systems | Computer Architecture

EXTRA-CURRICULAR

WatLock Design Team

Waterloo, Ontario, Canada | Oct 2018 - Apr 2019

- Business/Finances team, **wrote funding proposals** for UBC airlock competition
- Pitched design team to sponsors: UWaterloo faculties and corporate sponsors

Ontario Provincial Honour Band

Toronto, Ontario, Canada | Oct 2017 - Nov 2017

- **Principal Bass Clarinet**, rehearsed/performed with 100 peers over one week camp