


CONTACT

 tony.shen@uwaterloo.ca

 tonisco82.github.io

 linkedin.com/in/tonisco82

 github.com/tonisco82

SKILLS

Languages

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

Tools/Technologies

Git | UNIX | Eclipse | VSC
SQL Server | MySQL | Power BI
Postman | GCP | MATLAB | Excel

Documentation

Jira | Confluence | Figma

Methodologies

Agile | Scrum | SDLC

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 both 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

Personal Website (HTML/CSS)

- Simple portfolio website

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 - 4B

EXPERIENCE

Product Manager, Markets

Northern Labs | Sep 2022 - Dec 2022

- Oversaw product development for Web3 market making platform, used JIRA/Figma to effectively convey business requirements from trading team to devs
- Led company's DeFi initiative, integrating app with a blockchain explorer API to allow for monitoring DEX positions in-house, verifying data in Postman
- Conducted Due Diligence & API research on multiple vendors for approval/funding
- In Feature Demo to executive team, displayed v2/v3 liquidity pool position in app
- Specified DB schema in ERD (data sources, field derivation) for Client Reporting & Balance Sheet dashboards, visualizing FE user flows using Figma prototypes
- Designed product roadmap in JIRA, prioritized features & assessed scope/capacity
- Compiled operational checklist (set of steps) for onboarding of a new client/token

Product Owner | Business Systems Analyst

Questrade | Jan 2022 - Present

- Gathered requirements for improving all trading platforms (desktop/web/mobile)
- Created Postman Collection, used to analyze API gaps and identify critical bugs
- Used JIRA to write clear acceptance criteria for new features, bugs, UI/UX (Figma)
- Mapped E2E user journeys (order entry/alerts APIs) using UML Sequence Diagrams
- Generated monthly orders/positions PowerBI reports using SQL

Business Systems Analyst

TD Securities | Jan 2021 - Apr 2021

- Performed requirements analysis for internal Reference Data Application, detailing addition of new fields/instruments into our system in JIRA user stories
- Wrote SQL scripts to query tables, verifying data availability using Postman & GUI

Automation Process Controller | Monitoring and Support Analyst

TD Bank Group | Sep 2019 - Dec 2019

- Leveraged Blue Prism RPA to automate repetitive business tasks w/ digital workers
- Wrote Process Design Document (PDD) mapping task to sequence of bot keystrokes
- Reduced number of bot resets 19%/month with new exception handling process

Information Security Analyst

Home Trust Company | Jan 2019 - Apr 2019

- Project Lead for Crowdsourced AI POC: coordinated Legal, Compliance, ERM, InfoSec, Data Gov. teams and created project docs (Gantt charts, SOW, Risk ass.)
- Wrote SQL scripts (SSMS) to pull data, remediated in Excel using VLOOKUP

EDUCATION

University of Waterloo

Waterloo, Ontario, Canada | Sep 2018 - Present

- Candidate for Bachelor of Applied Science 2023 - 4B Honors Computer Engineering
- Data Structures and Algorithms | Co-op & Adaptive Algorithms | Database Systems | Systems Programming & Concurrency | Real-Time Operating Systems | Compilers | Programming for Performance | Advanced Calculus | Software Design, Architecture

EXTRA-CURRICULAR

WatLock Design Team

Waterloo, Ontario, Canada | Oct 2018 - Apr 2019

- Business/Finances team, wrote funding proposals for UBC Mars airlock competition
- Pitched design team goals 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