




Tony Shen

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Skills

SOFTWARE

C++ | C | Java | Python | Git | UNIX | Eclipse | HTML | CSS
SQL | SSMS | DB2 | R | Excel | Blue Prism RPA | Windows OS
Project Management | Agile | SDLC | Microsoft Office Suite

TEAMWORK | COMMUNICATION

- **Project manager** at co-ops, led IT/Business teams
- Customer service job, working in large team
- Led various music groups, **section leader/principal**

TIME MANAGEMENT | ORGANIZATION

- Administered **project timelines** and **documentation**
- Balanced extracurriculars, job, school, volunteering

INDEPENDENT WORK | SELF-DRIVEN

- **Self-taught** C++, Java, SQL, R w/ online material
- Self-motivated, **very fast learner**, strong work ethic

Projects

DATA STRUCTURES AND ALGORITHMS (C++)

- Implemented with **minimal runtime/cost** requirement
- Data structures: (de)queue, linked list, hash table, quadtree, minimum spanning tree, (un)directed graph

SYSTEMS PROGRAMMING AND CONCURRENCY (C)

- *Assignments*: Solve varied **multi-threaded** problems using fork(), mutex/semaphores, server connection
- *Labs*: Use multi-thread **cURL** to extract image strips from web, use **IPC** shared memory queue to solve **producer (cURL) consumer (reconstruct)** problem

REAL-TIME OPERATING SYSTEMS (C)

- Implemented, and tested a real-time task scheduler for periodic (EDF) and aperiodic (**pre-emptive priority**)
- **Binary buddy** memory allocation for tasks, mailboxes
- **Inter-task comm.** w/ mailboxes, can fill (blocks task)

OPERATIONAL DATABASE (C++)

- Input from user and .csv, output to file, **user friendly**, functions to **sort fields/find stats**, C++ self-teaching

PERSONAL WEBSITE (HTML, CSS)

- Simple **portfolio website**, self taught web design

Education

UNIVERSITY OF WATERLOO *SEP 2018 – PRESENT*

- Candidate for Bachelor of Applied Science 2023 - **Honours Computer Engineering - Term 3B**
- Data Structures and Algorithms | Database Systems
System Programming & Concurrency | Adv. Calculus

MARKHAM DISTRICT HS *SEP 2014 – JUN 2018*

- **Advanced Placement**, Gifted Program, **Honour Roll**

COLLEGE BOARD AP EXAMS *MAY 2017 – MAY 2018*

- Achieved **Level 4**: AP Physics 1, AP Calculus AB

UWATERLOO MATH CONTESTS *DEC 2016 – APR 2018*

- Placed **Top 25%**: Euclid, Galois, Cayley, and CIMC

Experience

BUSINESS SYSTEMS ANALYST

TD SECURITIES

JAN 2021 – APR 2021

- Security Master: **reference data** app (BBG, DBRS, etc.)
- **Agile** environment, used **JIRA** for monthly sprints (new security reference data/fields, app maintenance, etc.)
- Updated JIRAs w/ timelines/dependencies/stakeholders
- Oversaw sprint end-to-end: **requirement gathering**, prep, design/dev, **testing** (below), deployment, retro
- **SIT**: wrote **SQL** (SSMS) to verify tables have new fields
- **PAT**: used **Postman API** (request/response) and **GUI** to verify downstream consumers have all new information
- Facilitated monthly deployment (thru **ServiceNow** CR)
- Consolidated internal sheets w/ Bloomberg (Terminal)
- Wrote/updated process documentation on **Confluence**

ACCESS/MONITORING & SUPPORT ANALYST

TD BANK

SEP 2019 – DEC 2019

- Innovative Automation (IA): leverage **Blue Prism RPA** to automate repeatable business tasks (digital workers)
- **Created/maintained schedules** for processes to run during peak times, corresponding to business need
- Resolved production issues quickly with dev/testers
- Established **automated password reset processes** to improve security protocol, logged all exceptions
- Performed **root cause analysis** to reduce the number of resets required by **19%** in first month
- Managed project documentation: **Gantt charts**, project dashboards, digital worker lookup tables
- Communicated using **SharePoint**, JIRA, Office, Teams

INFORMATION SECURITY ANALYST

HOME TRUST COMPANY

JAN 2019 – APR 2019

- **Project Lead** for **Crowdsourced AI POC**, organized Legal, Compliance, ERM, InfoSec, Data Gov. teams
- Made project documentation: SOW, **risk assessment**
- Wrote **SQL** (SSMS) to pull datasets, then remediated using Excel functions: **vlookup**, pivot tables, **macros**
- Increased company-wide employee cybersecurity awareness by **24%** over first month
- Presented monthly security event summary to execs, with **KPIs** (trends/outliers) from **IBM QRadar SIEM**
- Managed employee access through **ServiceNow**
- **Governance**: performed monthly role owner attestation

Extracurriculars

WATLOCK DESIGN TEAM

OCT 2018 – APR 2019

- Business/Finances team, **wrote funding proposals**, pitched to UWaterloo faculties, company sponsors

ON. PROVINCIAL HONOUR BAND *OCT 2017 – NOV 2017*

- **Principal Bass Clarinet**, rehearsed/performed with 100 musicians throughout one week camp

MDHS MUSIC PROGRAM

SEP 2014 – JUN 2018

- Spent 5+ hrs/week rehearsing: Wind Symphony (**section leader**), Jazz Band, Clarinet Quartet
- Taught music, setup rehearsals, **coordinated section**