

WORK EXPERIENCE

File System Developer at MICROSOFT Aug-Dec 2017

- Designed & implemented end-to-end dehydrated cloud file copy protocol in NTFS, saving significant bandwidth and disk space when a copy is issued on cloud-stored files (i.e. on OneDrive)
- Filed patent for the cloud copying technique
- Implemented various performance improvements and bugfixes for NTFS

Database Developer at MAGNA INTERNATIONAL Aug-Dec 2016

- Overhauled Defect Detection & Classification system backend to improve mean query time by a factor of 5
- Optimised database server job scheduling to reduce performance bottlenecks, allowing all defects to be properly tracked
- Implemented automatic reconnection for dropped mould HMI connections, saving 10 man-hours per week

Full Stack Developer at SHOPIFY Jan-Apr 2016

- Created mobile phone payment method for customers in developing countries
- Improved resiliency of accounting software integrations (Xero & Intuit), reducing unhandled exceptions by 35%
- Created Postmates and UberRush local delivery integrations

Android Developer at TD CANADA TRUST May-Aug 2015

- Rapidly created web & Android prototypes involving new technologies for banking (e.g. internet of things), bringing them from ideation to minimum viable product in 4 week sprints

Software/Tool Developer at NANOMETRICS Sept-Dec 2014

- Developed software & firmware for seismometers
- Verified & debugged prototype PCBs

Backend Developer at RECOGNIA Jan-Apr 2016

- Built backend & API for website for technical analysis of financial instruments
- Created new caching strategy, reducing cache misses 60%

PROJECTS

CHORUS - Inexpensive High Quality Recording (Capstone Project)

- Using machine learning and digital signal processing techniques, created a system to allow amateur musicians to record better quality vocal/instrumental tracks using readily available microphones (cell phones, laptops)

UW AUTONOMOUS SAILBOAT TEAM

- Implemented autonomous path planning software, and created automatic sail trim control system for an RC sailboat in hardware. The boat is to race with zero human input

TECHNICAL SKILLS

PROFICIENT IN: C/C++, Java, SQL, Ruby on Rails

FAMILIAR WITH: Python, Perl, Verilog, ARM Assembly, Javascript, Bash

TOOLS: Git, GDB, WinDbg, OpenMP/OpenCL, Valgrind suite, \LaTeX

EDUCATION

University of Waterloo, Waterloo, Canada

- Bachelor of Applied Science, COMPUTER ENGINEERING, 2018. With Distinction

- Key courses: Programming for Performance, Digital Signal and Image Processing, Computer Architecture, Embedded Systems, Computer Security, Operating Systems, Data Structures and Algorithms

INTERESTS AND ACTIVITIES

- Leadership roles in UWaterloo Orientation Week, Engineering Society & Graduation Committee
- Competitive collegiate e-sports: Team co-ordinator for UW Heroes of the Storm, Team captain for Hearthstone
- Competitive sailor, avid cross-country skier, amateur saxophone player
- Fluent in English and French, basic knowledge of Dutch