

# TREVOR VAN LEEUWEN

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## WORK EXPERIENCE

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### Microsoft – File System Developer

C, C++

Aug – Dec 2017

- Designed and 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 on the cloud copying technique
- Improved internal testing tools for cloud file systems, formalising structure and easing integration of new features

### Magna International – Database Developer

MySQL, VB.NET

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. Previously 15% of defects were not being tracked, blocking process and maintenance teams from fixing problems

### Shopify – Full Stack Developer

Ruby on Rails, MySQL

Jan – Apr 2016

- Created mobile phone payment method for merchants in developing countries, especially those with low credit card penetration
- Improved resiliency of accounting software integrations, reducing unhandled exceptions by 35%
- Created Postmates and UberRush local delivery integrations, allowing merchants to get product to customers within hours

### Nanometrics – Firmware Developer

C++, bash

Sept – Dec 2014

- Developed firmware for seismometers
- Verified & debugged prototype PCBs

### TD Canada Trust – Android Developer

May – Aug 2015

### Recognia – Backend Developer

Jan – Apr 2014

## PROJECTS

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### Chorus – Inexpensive High Quality Recording (Capstone)

Python, MATLAB, PyTorch, FASST

- Using machine learning and digital signal processing techniques, created a system to allow amateur musicians to record better quality vocals using cheap, available microphones (cell phones)
- Focused on applications for *a capella* groups, using source separation to allow independent mixing of voices recorded together

### UW Autonomous Sailboat Team

Python

- Implemented autonomous path planning software for round-the-buoys races on a 2 metre model sailboat
- Created automatic sail trim system in hardware

## TECHNICAL SKILLS

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SKILLED	C/C++, Java, SQL, Ruby
FAMILIAR	Python, Perl, Verilog, Javascript
TOOLS	Git, GDB, WinDbg, Bash, Valgrind suite, OpenMP

## EDUCATION

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### University of Waterloo, Canada

- Bachelor of Applied Science, 2018  
COMPUTER ENGINEERING  
With Distinction
- Key courses: Programming for Performance, Digital Signal and Image Processing, Computer Architecture, Embedded Systems

## INTERESTS

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- Proven leadership, with roles in UW Orientation Week, Engineering Society and Graduation Committee
- Team manager for UW Heroes of the Storm (esports)
- Competitive sailor
- Nordic ski coach
- Fluent in English and French, basic knowledge of Dutch