Colin Howes

colinhowes.me | GitHub:/chowes | LinkedIn:/colin-howes
chowes@uwaterloo.ca | 226-979-1031

EDUCATION

UNIVERSITY OF WATERLOO
MMath Computer Science - Co-op
Expected Dec 2018 | Waterloo, ON
GPA: 3.98 / 93%

UNIVERSITY OF GUELPH
MSc Neuroscience and Applied Cognitive Science
December 2016 | Guelph, ON
GPA: 3.98 / 94%

COURSEWORK
Artificial Intelligence - IP
Advanced Distributed Systems - IP
Empirical Performance Evaluation - IP
Computer Networks - 96%
Computer Security and Privacy - 96%
Research Design and Statistics - 96%
Operating Systems - 91%
Algorithms - 89%
Data Structures 94%

IP: In Progress

SKILLS

PROGRAMMING LANGUAGES
Java • C • Python • C++ • R

TECHNOLOGIES AND TOOLS
Git • Linux • Android
Shell Scripting • LaTeX

WEB TECHNOLOGIES
HTML • CSS • JavaScript
AngularJS • MySQL/SQLite

EXPERIENCE

PERCEPTION TEAM CORE MEMBER
WATonomous - SAE AutoDrive Challenge Team
Sept 2017 - Present | Waterloo, ON
- Design and implement computer vision algorithms to enable sign recognition in an autonomous vehicle
- Currently in the stage of evaluating frameworks and inter-process communication mechanisms

GRADUATE RESEARCH ASSISTANT
University of Guelph - Department of Computer Science
Dec 2015 – Dec 2016 | Guelph, ON
- Developed a survey platform in collaboration with a team of public health researchers aimed at facilitating data collection from remote communities
- Designed a survey builder that enables non-technical researchers to create a database of questions and responses that could be combined into complex, targeted, and dynamic surveys

GRADUATE RESEARCH ASSISTANT
University of Guelph - Department of Psychology
Sep 2014 – Dec 2016 | Guelph, ON
- Led a two year research project investigating the effects of prenatal exposure to testosterone on learning and social behaviour
- Trained and mentored a large team of undergraduate students

SEMINAR INSTRUCTOR
University of Guelph
Sep 2014 – Dec 2016 | Guelph, ON
- Led a seminar on research methods and statistics for high-achieving upper year undergraduate students interested in graduate studies

PROJECTS

WatFS GitHub
- Remote file system built on top of FUSE, using gRPC as a communcation mechanism

DATA CENTER TCP REPLICATION GitHub
- Replicated DCTCP performance experiments related to incast congestion and ECN parameter tuning using data center network topologies modeled in the Mininet network emulator

RELIABLE FILE TRANSFER GitHub
- Designed a file transfer server with TCP-like reliability mechanisms implemented in C and C++ over top of the Linux UDP socket interface

IMPROVED INITIATIVE GitHub | Google Play
- Developed an Android app to facilitate gameplay management for tabletop roleplaying games like Dungeons and Dragons
- Over 1000 users and a 4.2 star rating on the Google Play Store