

Dr. Christopher Henry Biography

Dr. Henry, P. Eng. (Applied Computer Science, University of Winnipeg) is an Associate Professor and obtained his Ph.D. from the Department of Electrical and Computer Engineering at the University of Manitoba. He has many years of experience working in reinforcement learning and with theoretical frameworks for modelling human perception. Since 2013, Dr. Henry has been working on applications of deep learning neural networks including collaborations with Sightline Innovation on data augmentation techniques for deep convolutional neural networks; with GeoManitoba in using convolutional neural networks to classify satellite image pixels for the creation of a land use/land class maps of Manitoba; with Northstar Robotics on using deep convolutional neural networks for precision agricultural applications; with BigShig music in applying recurrent neural networks to vocal recordings; and, most recently, a collaboration with DecisionWorks on using machine learning to predict customer behaviour. Dr. Henry is currently supervising three M.Sc. thesis students working on these aforementioned projects.

Additionally, Dr. Henry has recently started investigating the marriage of computational topology and proximity approaches with current machine learning methods based on insights gained through his work on applications of machine learning. Dr. Henry is also an expert in general purpose computing using GPUs, which is the computational engine driving recent advances in deep learning. Together, with Dr. Christopher Bidinosti, he established the University of Winnipeg as an NVIDIA GPU Education Centre and created a GPU Lab for applied parallel computing and collaborative research. During his academic career, Dr. Henry has published 22 peer-reviewed journal papers, 11 conference papers, and 2 book chapters, and he has secured over \$560,000 in research funding since starting his career at the University of Winnipeg.