

PROFESSIONAL EXPERIENCE

CTO & Co-Founder

Jan 2018 – Present

COINSCIOUS INC.

CEO & Founder

Jun 2017 – Present

AIFOUNDED INC. – TORONTO, CANADA

Connecting artificial intelligence and business, creating industry leading AI powered by a search engine. Licensing search engine to AI industry — providing commercial search engine API allowing users to customize AI agents that retrieve information. Top machine learning labs have conducted research and published papers using AIFounded search engine — with academic research successfully transferred over to development. Participating in M&A process and leading due diligence efforts for clients.

Top machine learning lab partnerships include: New York University, University of Montreal (MILA), and York University

Major AI clients include: Chatter Research and Incmind Inc.

AI Researcher

Mar 2016 – Present

JANELIA RESEARCH CAMPUS, BRANSON LAB – ASHBURN, VIRGINIA, US

AI researcher under the supervision of Dr. Kristin Branson — a world-renowned expert in computational biology, focused on the application of machine vision and learning to the problems of automatic animal tracking, supervised behavior detection, and unsupervised behavior mining.

Primary research: collaborating on animal social behaviors and their neural activities with top neuroscientists in the world

Other research: interactive & active metric learning, stochastic optimization methods, and GAN evaluation metric

AI Researcher

Apr 2015 – Mar 2016

UNIVERSITY OF MONTREAL, MILA – MONTREAL, CANADA

AI Researcher under the supervision of Dr. Roland Memisevic and Dr. Yoshua Bengio — pioneers in deep learning.

Primary research: deep generative models — including auto-encoders, variational auto-encoders, and GANs

AI Research Assistant UNIVERSITY OF GUELPH, ENGINEERING – GUELPH, CANADA

Sep 2013 – Apr 2015

AI research assistant under the supervision of Dr. Graham Taylor — director of NextAI, Canada’s leading AI startup accelerator, and researcher at Vector Institutes.

Application project: semi-supervised neural network on hyper-spectral images

Primary research: dynamic system based deep learning algorithms, such as theoretical results on gated auto-encoder under the gradient field, and persistent minimum probability learning for Restricted Boltzmann Machines

Secondary research: distance metric learning that optimizes the soft form of Naïve Bayes Nearest Neighbor selection

R&D Specialist

SIGHTLINE INNOVATION INC. – TORONTO, CANADA

Nov 2012 – Aug 2013

Designed and implemented the backend component of the VtiS System, a job match scoring system using Apache Hadoop.

Research Assistant

UNIVERSITY OF TORONTO, COMPUTER SCIENCE – TORONTO, CANADA

Sep 2012 – Nov 2012

Researched on computational and constructional approaches to the semi-productivity of light verb construction formation. Found meaningful representation of multi-word expression features.

**Quantitative Analyst
(Work Study Program)**

UNIVERSITY OF TORONTO, MATHEMATICS – TORONTO, CANADA

Oct 2010 – Nov 2010

Analyzed combinatorial recursions of very special types, and derived an improved understanding of the complex behavior to find representation of multi-word expression features. Worked with special types of recursion, such as nested recursion, iterative recursion, and meta-Fibonacci recursion.

Data Analyst

AIR CANADA BUSINESS INTELLIGENCE – TORONTO, CANADA

May 2009 – Sep 2009

Designed and built automated reports for airport branches. Utilized business intelligence tools — such as Microsoft Reporting Services, OLAP cube (SSAS), and ETL (SSIS) using SQL server database — to analyze data.

EDUCATION

M.Sc. Computer Science

2013 – 2014

UNIVERSITY OF GUELPH – GUELPH, CANADA

- Supervision under Dr. Graham Taylor
- Research included: deep learning, unsupervised learning, statistical machine learning
- P.H. Southwell Research Travel Grant Scholarship (2014)
- Dean's Scholarship (2013, 2014)
- GPA: 89/100

B.Sc. Computer Science

2008 – 2012

UNIVERSITY OF TORONTO – TORONTO, CANADA

- Graduated with Distinction, Honors B.Sc.
- Specialization: Computer Science Artificial Intelligence
- Specialization: Mathematics and Its Application
- 3rd and 4th year GPA: 3.8

CERTIFICATE

2012

COURSERA

- Neural Networks for Machine Learning at University of Toronto from G.E. Hinton

CERTIFICATE

2009

PRO

- Designing and Developing Windows-based Applications by using the Microsoft .NET Framework

PUBLICATIONS

- Daniel Jiwoong Im, Allan He Ma, Graham Taylor, Kristin Branson., Quantitatively Evaluating GANS with divergences proposed for training. International Conference on Learning Representations (ICLR), 2018
- Jiatao Gu, Daniel Jiwoong Im, Victor O. K. Li, Neural Machine Translation with Gumbel-Greedy Decoding. AAAI-18: Thirtieth AAAI Conference on Artificial Intelligence (AAAI), 2018
- Daniel Jiwoong Im, Michael Tao, Kristin Branson, An empirical analysis of the optimization of deep network loss surfaces. <https://arxiv.org/abs/1612.04010>, 2017
- Daniel Jiwoong Im, Sungjin Ahn, Roland Memisevic, Yoshua Bengio, Denosing Criterion for Variational Auto-encoding Framework, AAAI-17: Thirtieth AAAI Conference on Artificial Intelligence (AAAI), 2017
- Daniel Jiwoong Im, Allan He Ma, Dongjoo Kim, Graham Taylor, Generative Adversarial Parallelization,

<https://arxiv.org/abs/1612.04021>, 2016

- Daniel Jiwoong Im, Graham Taylor, Learning a metric for Class-Conditioned KNN, International Joint Conference on Neural Networks (IJCNN), 2016
- Daniel Jiwoong Im, and Mohamed I. D Belghazi, Roland Memisevic, Conservativeness of untied auto-encoders. AAAI-16: Thirtieth AAAI Conference on Artificial Intelligence (AAAI), 2016
- Daniel Jiwoong Im, and Mohamed I. D Belghazi, Roland Memisevic, Generating Images with Recurrent Adversarial Networks. <http://arxiv.org/abs/1602.05110>, 2016
- Daniel Jiwoong Im, and Graham W. Taylor, Scoring and Classifying with Gated Auto-encoders, European Conference of Machine Learning (ECMLPKDD), 2015
- Daniel Jiwoong Im, Ethan Buchman, and Graham W. Taylor, An Empirical Investigation of Minimum Probability Flow Learning under Different Connection Patterns European Conference of Machine Learning (ECMLPKDD), 2015
- Jiwoong Im, and Graham W. Taylor Semi-Supervised Hyperspectral Image Classification via Neighbourhood Graph Learning In IEEE Geoscience and Remote Sensing Letters, 2015
- Jan Rudy, Weiguan Ding, Daniel Jiwoong Im, and Graham W. Taylor, Neural Network Regularization via Robust Weight Factorization, Arxiv Preprint, <http://arxiv.org/pdf/1412.6630v2.pdf>, 2015
- Jiwoong Im, (2013) How Is Math Applied in Finance. Notes from the Margin Volume VI 2013, Press: Canadian Mathematical Society (p. 4-5, Print), 2013

REVIEWERS ACTIVITIES

- Neural Computation 2018
- IEEE Transactions on Neural Networks and Learning System 2017
- Neural Information Processing Systems 2016
- IEEE Geoscience and Remote Sensing Letters 2016
- IEEE Transactions on Knowledge and Data Engineering 2015

TALKS

- AIFounded Search Engine & AI @ Borealis AI (a.k.a. RBC Research), 2017
- Exploring Deep Neural Network Loss Surface @ OpenAI, ElementAI, BorealisAI, York University, 2017