

Trinh Hoang Trieu



<https://thtrieu.github.io>

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Education

2013 – present	Bachelor of Science Advanced Program in Computer Science	Ho Chi Minh University of Science Vietnam National University
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Research Internships

May 2016 – July 2016	Misfit Wearables Inc.	Deep Learning for Machine Vision
<ul style="list-style-type: none">Work with Tensorflow, Caffe, <i>bring Deep Learning models onto mobile devices.</i>		
January 2016 – March 2016	Japan Advanced Institute of Science and Technology	Deep Learning for Natural Language Processing
<ul style="list-style-type: none">Translate original <i>Theano</i> code to <i>Tensorflow</i>, experiment new models on new dataset.Implemented: <i>Long Short Term Memory</i>, <i>Gated Recurrent Unit</i>, <i>CNN - LSTM</i> with <i>Tensorflow</i> on top of Mikolov's Word2vec embeddings.Improved vanilla Convolutional baseline for Question Classification on Vietnamese TREC dataset.		
June 2015 – September 2015	Ecole Polytechnique de Montreal	Educational Data Mining (EDM)
<ul style="list-style-type: none">Build a <i>computational graph</i> as an open sourced <u>R package</u> to perform educational data synthesizing.Automate learning parameters and generating new data under 11 standard models of EDM.		

Open-sourced Projects

August 2016 – present (on going)	<u>Darkflow</u> ★ 112	Python, Tensorflow
<ul style="list-style-type: none">A visual oriented deep learning application, with Tensorflow back-end.Allows designing the deep net in text format, training and freezing the graph for production environment.Compatible with <u>Darknet</u> framework: load / partial load / extract binary weights.Current working models: YOLOv1 and the new YOLO9000 – real time object detection and classification.Trained a new YOLO model for object detection and classification in office setting (four classes).Featured as an <u>Awesome Tensorflow repository</u>.		
December 2016 – present (on going)	<u>Essence</u>	C, Cython, Python, Numpy
<ul style="list-style-type: none">A symbolic, Directed Computational Graph constructor built from scratch, with auto differentiation supported.Working optimizers: vanilla Stochastic Gradient Descent, RMSProp and ADaptive Momentum estimator.Working demo models: Depth-2 MLP, LeNet with Batch Normalization, Long Short Term Memory on Word2Vec for sentence classification, Neural Turing Machine for copying task.A selected project on <u>A Wild Week in A.I. newsletter</u> #35.		
December 2015 – May 2016	<u>Educational Data Synthesizer</u>	R (Statistical Computing Language)
<ul style="list-style-type: none">Version 2.0, allow customizing the built-in models and adding new nodes / interactions / models to the graph.		
March 2016 – June 2016	<u>Last Layer of DeepNets</u>	Python, Tensorflow
<ul style="list-style-type: none">Modify the last layer of a deep classifier, experiment on SVM and Linear Fisher Discriminant.Replace the soft-max with the above linear classifier and perform classification in One-Vs-All scheme.Experimented adding a regularizer to encourage feature separability for SVM training.		

Honor, Awards and Scholarships

2016	Wilmar CLV's top 24 students to present at Project presentation round (top 15%)
2016	Japan Student Services Organization (JASSO) Scholarship for Research (top 10%)
2015	America Chamber of Commerce scholarship (top 12%)
2015	Mitacs Globalink Research Full Scholarship (top 7%)
2014	Full Scholarship for First Ranked Student of 2013 - 2014
2013	Full Scholarship, University Entrance Valedictorian
2012	Bronze medal – Southern Vietnam Mathematics Olympiad Third prize – Provincial Competition