

Mohamed Ashraf Abdelsalam

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Education

Mila/Université de Montréal, Quebec, Canada	2019- 2021
Degree: MSc in Machine Learning	
Supervisor: Sarath Chandar	
Zewail University of Science and Technology, Giza, Egypt	2013 - 2018
Degree: B.Sc. in Aerospace Engineering	
Bachelor Project: Attribute-based Face Generation Using Progressive GANs	
Supervisor: Elsayed Hemayed	

Work Experience

Machine Learning Intern, Banque Nationale Du Canada, Montreal, Canada	May 2019 - Sep 2019
- Works on security and anomaly detection using ML techniques in the bank database.	
Teaching Assistant at Zewail University of Science and Technology, Giza, Egypt	Sep 2018 - Dec 2018
- Courses: CIE 417 Machine Learning.	
Undergraduate Research Intern, Computer Vision Lab, ETH Zurich, Switzerland	June 2016 - Sep 2016
- Worked on Learning based Super-Resolution using Sparse Representation.	
- Investigated methods for exploiting internal information from the image itself rather than training on an external pool of training images, In addition to comparing both methodologies.	

Projects

TT-Transformer, Matrix and Tensor Factorization for ML IFT6760A	Winter 2019
- Compressing the Transformer using Tensor Train Decomposition.	
- Achieving a compression rate of 2.58 with a minimal loss in accuracy on the task of Machine Translation.	
Attribute-based Face Generation Using Progressive GANs, Bachelor Project	Spring 2018
- Used conditional GAN networks to create realistic faces satisfying a set of face attributes.	
- The modified network was built upon Progressively Growing GANs and not Vanilla GANs.	
- Framework used was Tensorflow, training took place on a GPU Google Cloud instance, dataset used was CelebA.	
Kickstarter Projects Success Prediction	
- Predict success or failure of Kickstarter projects given project short description.	
- Linear SVM with Bag of Words representation were used as baseline.	
- LSTM, GRU and CNN with learnable word embeddings (randomly initialized and GloVe initialized) were applied and compared, using PyTorch on an AWS p2.xlarge instance.	
Volajj, Hajj Hackathon, Jeddah, Saudi Arabia	August 2018
- An Android app for matching volunteers to pilgrims in one click.	
- Created activities related to reading the barcode, getting gps location, and sending this data to a Firebase Database.	
Scene Recognition, Remote Sensing SPC 303	Fall 2015
- Extracted SIFT descriptors for the interest points. They were clustered using Bag of Words, which were used in the classification using linear SVMs. This was done using MATLAB.	
RollX, Dynamics SPC 218 (Simulation video here, Trial video here)	Spring 2015
- Designed and manufactured a Cubli inspired jumping machine based on the conservation of angular momentum.	

Skills and Qualifications

Technologies & Programming Languages:

Working Knowledge:

Python (Numpy, Pandas, PyTorch, Tensorflow, scikit-learn, NLTK), C++, MATLAB

SQL, Git, Google Cloud

Basic Knowledge: C#, Java, HTML5, CSS, Django, FLASK, Javascript

Languages: Arabic (Native), English (Fluent), French (Fair)

Relevant Courses

University Courses: Representation Learning (Deep Learning), Matrix and Tensor Factorization for ML, Data Structures and Algorithm, Probabilistic Graphical Models, Probability & Statistics, Linear Algebra, Calculus I&II, Computer Architecture, Database, Artificial Intelligence

Online Courses: Convolutional Neural Networks for Visual Recognition (Stanford), Machine Learning Postgraduate Course (British Columbia), Learning from Data (Caltech), Introduction to CS and Programming using Python (MIT)

Extracurricular Activities & Hobbies

Social Intern, AIESEC GLocal Community Development, Malaysia

Aug 2014 – Sep 2014

Participant in STP HR workshop, Cairo University, Egypt

Spring 2013

Hobbies: Tennis, Chess, Swimming