Olivier Nguyen

http://github.com/olinguyen

Email : nguyenolive@gmail.com
Mobile : +1-xxx-xxx-xxx

EDUCATION

University of Waterloo　　　　　　　　　　　　　　　　　Waterloo, Canada
Master of Applied Science in Electrical & Computer Engineering　　*Sep 2016 – Aug 2018*
Supervisors: Mark Crowley, Joon Lee

Concordia University　　　　　　　　　　　　　　　　　Montreal, Canada
Bachelor of Computer Engineering, with Distinction　　　　　*Sep 2012 – May 2016*

EXPERIENCE

Element AI　　　　　　　　　　　　　　　　　Montreal, Canada
Applied Research Scientist　　　　　　　　　　　　*Sep 2018 – Present*

- Researching and applying deep learning to various natural language processing problems.
- Prototyping and implementing solutions using TensorFlow, Keras and PyTorch.
- Participating in the discussion and planning of research projects.

University of Waterloo　　　　　　　　　　　　　　　　　Waterloo, Canada
Research and Teaching Assistant　　　　　　　　　　　*Sep 2016 - Aug 2018*

- **Research - Machine Learning**: Researched on data-driven decision making in health-care, mobile health, machine learning and deep learning.
- **Teaching - Data Structures & Algorithms (ECE250)**: Assisted students during lab hours for programming assignments. Marking assignments, labs and exams.

NTT Media Intelligence Lab　　　　　　　　　　　　　　Yokosuka, Japan
Research Intern (Co-op)　　　　　　　　　　　　　*Jan 2015 - Aug 2015*

- Built, trained & evaluated CNNs and SVMs for video classification using Caffe and scikit-learn.
- Trained a VGG-Net model and extracted deep features for the TRECVID Media Event Detection 2015.

Thales Group/Concordia University　　　　　　　　　　　Montreal, Canada
Research Assistant　　　　　　　　　　　　　　　*May 2014 - Dec 2014*

- Implemented signal processing algorithms on a TMS570 microcontroller in C for amplitude estimation of a sensor.
- Optimized code to meet real-time requirements using a fixed point implementation.

CAE　　　　　　　　　　　　　　　　　Montreal, Canada
Software Developer Intern (Co-op)　　　　　　　　　　*Sep 2013 – Dec 2013*

- Developed automated system tests in C++ for the synthetic environment simulation used in flight simulators.
- Increased code coverage by 30% after completing the test plan.
- **Achievement**: Co-op Employers Choice Nominee (2013-2014)

SELECTED PUBLICATIONS

- Ben Kim, **Olivier Nguyen**, Arjun Puri, Joon Lee. *Smart activity tracker adherence and acceptance by older adults.* IEEE Biomedical and Health Informatics (2018).
- Puri Arjun, Ben Kim, **Olivier Nguyen**, Paul Stolee, James Tung, Joon Lee. *User Acceptance of Wrist-Worn Activity Trackers Among Community-Dwelling Older Adults: Mixed Method Study.* JMIR mHealth and uHealth 5-11 (2017).
- **Olivier Nguyen**, Yongqing Sun, Kyoko Sudo, Akira Kojima. *Semantic Video Classification by Fusing Multimodal High-Level Features.* Meeting on Image Recognition and Understanding (2015).

RESEARCH PROJECTS

- **PASS** *Healthy Data Behavior Challenge - Canada*
  - Developed a system that filters and aggregates Twitter data to provide population-level indicators of physical activity, sedentary behaviour and sleep for all health regions in Canada
  - Built a deep learning model consisting of a 1D-CNN with pre-trained word-embeddings that classified tweets to different health indicators using a small dataset

Projects

- **Open Source Developer** *Google Summer of Code 2017*
    - Applied machine learning algorithms to health data for mortality prediction.
    - Wrote software patches for the core C++ library.
    - Blogged weekly about the data project and showcased the Shogun library with tutorials.

- **Self-Driving Car Nanodegree** *Udacity*
    - **Traffic sign classifier**: Implemented a traffic sign classifier using Tensorflow with over 96% accuracy.
    - **Behavioral cloning**: Trained a deep learning model to mimic the behavior of a human driver in a car simulator.
    - **Road lane detection**: Coded the pipeline to identify lane boundaries in a video from a car's front-facing camera.
    - **Vehicle detection**: Wrote the pipeline to detect & track cars in a video stream using HOG and a LinearSVM.

- **Lung Cancer Detection (Kaggle)**: Ranked 535/1679; Built a deep learning model that predicts whether or not a patient will develop lung cancer using CT scan images.
- **LearnStream (UofTHacks IV)**: 3rd Place; Android app for students with hearing impairments that transcribes speech from a lecture to text in real time.
- **EyeTalk (Hack4Health 2.0)**: Hackathon Winner; Android app that uses eye-tracking for communication to help people with severe speech disorders and hand impairments.
- **ConSat-3 (CSDC3)**: 1st Place; Developed and integrated embedded Linux software applications for a cube satellite.
- **Machine Competition (Jeux de Genie 2015)**: 1st Place; Developed the software for a fully autonomous robot that had to complete multiple tasks around a complex track. The robot won the 1st prize competing against participants in all engineering schools in Quebec.

Technical Skills

Programming Languages: Python, C, C++, Java, bash.

Technologies: Git, Numpy, Scikit-learn, Pandas, Keras, TensorFlow, OpenCV, Pytorch.

Operating Systems: GNU/Linux (Ubuntu), Windows, Android.

Languages: English, French, Vietnamese, Spanish (Basic).

Awards

2nd Place Capstone (Senior Design Project)	2015
Daniel Harrison International Work Term Grant (Co-op Award)	2015
1st Place Engineering Team Design Project Award (Junior Design Project)	2014
Dean's List	2013
Electrical and Computer Engineering Entrance Scholarship	2012