RISSER-MAROIX Olivier

Data Science Master's Degree Student

« Make Perceptron Great Again ! »

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WORK EXPERIENCE

CNES
Internship 6 months

02/2019 – 09/2019 — Toulouse, France

National Center for Space Exploration

- Satellite Image Segmentation for SWOT space mission (2021) with FCN / Dillated Convolution / UNet like architectures

Center for Machine Perception
Research Internship 3 months

06/2018 – 08/2018 — Prague, Czech Republic

CMP, Czech Technical University

- Compressing by 3 the size of a NIPS Neural Network without any score drop with separable convolutions and prunning in PyTorch

IRIT — SAMoVA group
Research Internship 3 months

06/2017 – 08/2017 — Toulouse, France

Institut de Recherche en Informatique de Toulouse, Toulouse University

- Clustering faces (re-identification) by identity & emotions on videos with siamese and triplet networks in Keras, scikit-learn, OpenCV

THALES Avionics
Internship 3 months

06/2016 – 08/2016 — Toulouse, France

- Developing an anomaly detection software for server monitoring with Python, SQL, Docker & Android

EDUCATION

Data Science Master's Degree
Sorbonne University - UPMC
Faculty of Science and Engineering

2017 – 2019 — Jussieu, Paris, France

Courses & Project

- Machine Learning, Computer Vision, Natural Language Processing, Business Intelligence, Artificial Intelligence
- Research project on conversational systems for information retrieval (under supervision of Laure Soulier & Ludovic Denoyer)
- **2nd semester with honors**

University degree in Computer Science
Université Jean-François CHAMPOLLION

2014 – 2017 — Albi, France

- Tutor for freshman and second year students
- **Validated with honors**
- Leading team projects with git and trello from 3 to 5 collaborators

MOOCs
Coursera

6+ months of online education

- Machine Learning : Classification — 7 weeks online University of Washington — coursera.org/verify/ANB2RMMA5PG5
- Detección de objetos — 6 weeks Universitat Autònoma de Barcelona — coursera.org/verify/M2VA24EZXA
- Machine Learning — 11 weeks Stanford University — coursera.org/verify/P9AD628X7GFK

SKILLS

Concepts

Deep Learning | Machine Learning | Computer Vision | NLP | Models Compression | Reinforcement Learning | Data Science

Coding

PyTorch | Keras | OpenCV | Python | sklearn | Flask | Lucene | Gensim | Hadoop | Java

SOME PROJECTS

Natural Language Query traduction into Keywords (2018)
- Report (state of the art & results found - french) : https://goo.gl/rqKoZT
- Diverse methods used : Seq2Seq, CRF (innovative & space efficient), BM25
- Dataset constructed from (several Go size) : Wikipedia, SQuAD, QALD

Detection of Generic in Series using Perceptual Hash on video frames (2016 – 2017)
- Talk given at Paris Machine Learning Meetup : bit.ly/gnrictalk
- Code : bit.ly/phashgnric — Report : https://goo.gl/Mg15hP

Python Package for Automatic REST API Generation (2019)
- Package : bit.ly/bapiPIP — Code : bit.ly/bapiDOC
- Python3.7, no dependency, introspection, REST HTTP server, 3 lines

TF-IDF Pdf Search Engine (2016)
- Code : bit.ly/podofo — Demo : bit.ly/podofoDmo

Visualisation of Drone VS Suicide Blast Attack in Pakistan (2017)
- Demo : https://youtu.be/-ie8qfa5QpA
- Managing project & building a web platform for data visualisation using FireBase, Ajax, JQuery, Bootstrap & other javascript frameworks

Kaggle Competitions (2018)
- Plant Seedlngs : TOP 17 % — Stateoil Iceberg : TOP 23 %

Apps (Android / Web)
- Apps published on Google Play (2015-16): bit.ly/ormps
- Learn arabic alphabet in efficient way (2019) : bit.ly/aralang in React & Material UI, with hand drawing recognition for auto assessment

Re-Implemented Papers

- Distilling the Knowledge in a Neural Network (NIPS '14)
- U-Net: Convolutional Networks for Biomedical Image Segmentation (MICCAI '15)
- Explaining and Harnessing Adversarial Examples (ICLR '15)
- Highway Networks (ICML'15)
- Adversarial Discriminative Domain Adaptation (CVPR '17)
- Adversarial Reprogramming of Neural Networks (ICLR'19)
- https://github.com/VieVie31/cool-papers-in-pytorch

LANGUAGES

French : C2, bilingual

English : B2, fluent

INTERESTS

Machine Learning | Piano (since 6 years old) | Flute (since 1 year) | Pipe Organ (since 12 years old), interpretation & improvisation | Archery | Scouting | Archeology | Knowledge Sharing