

Education

- 2019 - Today **PhD in Language Technologies**, *Carnegie Mellon University*, Pittsburgh.
Adversarial defenses, emphasis on audio/language. Participation to the GARD Darpa project.
- 2017 -2019 **M.S. in Language Technologies**, *Carnegie Mellon University*, Pittsburgh.
Elective courses : NLP, Neural Machine Translation, Deep Learning, Multimodal Learning, Advanced Machine Learning, Reinforcement Learning. GPA 4.0/4.0
- 2014 - 2017 **Diplôme d'ingénieur**, *École polytechnique*, Palaiseau.
Most selective scientific program in France. Ranked 60th/512
Multidisciplinary education with focus on Mathematics, Machine Learning and Vision.
- 2012 - 2014 **Preparatory classes for french Grandes Écoles**, *Lycée Pasteur*.
2 years of intensive training in Mathematics, Physics and CS - Rank 1st/40

Experience

- September 2018 - **Teaching Assistant**, *Carnegie Mellon*, Pittsburgh,PA, USA.
May 2019 11-785 Introduction to Deep Learning (300 students)
- April - August 2017 **Research Internship**, *AgroParisTech*, Paris, France.
Internship in Machine learning, focused on Boosting and transfer learning.
- June - August 2016 **Data Science Internship**, *DataScienTest*, Paris, France.
Design and development of the **datascientest.com** learning platform for Data Scientists.
Other Machine Learning and programming projects for several companies (Axa, COVEA,...).

Some projects

- Adversarial on audio Design a framework to design adversarial attacks and defenses on speech inputs.
Tutorial at Interspeech 2019
- NMT Compression Matrix compression in LSTMs/Transformers for parameter-frugal machine translation.
- Movie Description Improve movie clip description models with context cues from the entire movie.
- Low-resource NMT Transfer/multitask learning from high-to-low-resource languages in neural translation.
- Question Answering Semantic parsing to query web tables and improve web access for blind people.
- Code generation Neural code generation using subtree retrieval for inference. Selected at EMNLP 2018.
- Transfer Learning Boosting of weak projections on the target space. Presented at CAp 2017.
- Fact checking Development of a device that identifies wrong facts in conversations.

Toolbox

- Languages** Python, Java, C++, Caml, SQL
- Libraries** Scikit-learn, Numpy, Pytorch, DyNet, Keras, AllenNLP
- Technologies** MacOS, Linux, tmux, git, slurm, Docker, Alexa Skill Kit

Leadership and awards

- Leadership Officer Cadet in Gendarmerie (french military police), 2014-2015
- Awards Outstanding Investment award for involvement in cultural events at Polytechnique (2017), in competition for best scientific project award at Polytechnique (2016), Ranked 30th at national Polytechnique entrance exams (2014), 7th prize in county at french mathematics olympics (2011)