Rachid Riad | Curriculum Vitae

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My current area of research is Health Behavior Informatics via Speech analysis. The goal is to build technologies to support clinical practice during diagnosis and treatment of the Huntington disease.

Education

ENS - Paris Saclay **Cachan, FRANCE**
Master of Science, Machine Learning and Computer Vision, with Honours *2016–2017*
Courses: Object recognition and Computer Vision, Modelization in Neuroscience, Numerical Imaging, Reinforcement Learning, Graphs in Machine Learning, Convex Optimisation, 3D points and modelization, Online Learning

Ponts Paristech **Paris, FRANCE**
Engineering degree, Applied Mathematics and Computer Science, *2013–2017*
Computer Science (C++, Python), Spectral Analysis, Operational Research, Data Analysis, Machine Learning, Financial mathematics, Optimization

Lycée Pierre de Fermat **Toulouse, FRANCE**
Preparatory classes *2011–2013*
Preparatory classes for the highly competitive entrance exams to the Grandes Écoles
Intensive preparation in Math and Physics

Experience

Research

SPOClab, Vector Institute, University of Toronto **Toronto, Canda**
Visitor Researcher *April 2018–September 2018*
Supervised by Frank Rudzicz
Focus on Speech and Machine Learning for Health Behavior Informatics

Laboratoire de Neuropsychologie Interventionnelle, ENS **Paris, FRANCE**
Research Engineer *October 2017–March 2018*
Supervised by Anne-Catherine Bachoud-Levi and Emmanuel Dupoux
Building speech tools for Health Behavior Informatics
Co-supervision of a M2 intern in Machine Learning and Speech Processing

Laboratoire de Science Cognitive et Psycholinguistique, ENS **Paris, FRANCE**
Research Intern *April 2017–October 2017*
Supervised by Emmanuel Dupoux
Discovery of linguistic units from acoustic speech and multi-modal views

Carnegie Mellon University's Language Technologies Institute **Pittsburgh, USA**
Summer Research Intern *June 2017–August 2017*
2017 Jelinek Summer Workshop on Speech and Language Technology, Rosetta Stone project,

CERMICS applied Mathematics laboratory Ponts Paristech **Paris, FRANCE**
Research Intern *April 2014–August 2014*
Supervised by Bernard Lapeyre
Study of financial Mathematics model

Industry

Mapjam **San Francisco, USA**
Geo Software Engineer intern *October 2015–August 2016*
- Building GIS Stack and complex mapping applications.
- 500 start-ups accelerator program

Vehicle Data Science **Oakland, USA**
Software Engineer intern *September 2015–October 2015*
- Data visualisation with D3.js and Leaflet.js

Bouygues Construction **Paris, FRANCE**
Blue-Collar intern *September 2013 – October 2013*
- Blue-collar work on a construction site

Talks, etc.

Ponts Paristech **Paris, FRANCE**
Data Science week *February 2018*
Discover linguistics units from acoustic speech and other modalities

Univ. Grenoble Alpes (UGA) **Grenoble, FRANCE**
Post-JSALT workshop *January 2018*
Iterated unsupervised learning of acoustic and word units: a brief update

Languages

French: Native

English: Highly proficient in spoken and written

Spanish: Good working knowledge

Computer skills

Programming Languages: Python, C++, bash
Machine Learning: Theano, Pytorch, Sklearn
Web development: HTML/CSS, JavaScript
Visualisation: D3.js, Leaflet.js, Praat, Audacity
Databases: SQL, Postgres/Postgis,
OS: Linux, Docker

Hobbies

Basketball: Team Captain and practice of Basketball at regional level for 10 years

Soccer: Member of the Ponts Alumni Soccer Team

Community service

- Organisation of the career fair of three of the best engineering schools in France: this career fair hosts 3000 participants and has a 700k€turnover.
- I have been part of the team elected at Ecole des Ponts to represent the students. I have organised the farewell trip for my school for 200 people, managing a 15-person team with a budget of 20k€.

References

Industry	Academia
◦ Scollay Petry CEO of Mapjam	◦ Pr. Emmanuel Dupoux
◦ JD Margulici CTO of Infinite Uptime	◦ Pr. Anne-Catherine Bachoud-Levi
	◦ Pr. Bernard Lapeyre
	◦ Pr. Frederic Meunier

Publications

Nils Holzenberger, Mingxing Du, Julien Karadayi, Rachid Riad, and Emmanuel Dupoux. Learning word embeddings: unsupervised methods for fixed-size representations of variable-length speech segments. In *Nineteenth Annual Conference of the International Speech Communication Association*, Hyderabad, India, September 2018.

Graham Neubig, Matthias Sperber, Xinyi Wang, Matthieu Felix, Austin Matthews, Sarguna Padmanabhan, Ye Qi, Devendra Singh Sachan, Philip Arthur, Pierre Godard, John Hewitt, Rachid Riad, and Liming Wang. XNMT: The extensible neural machine translation toolkit. In *Conference of the Association for Machine Translation in the Americas (AMTA) Open Source Software Showcase*, Boston, March 2018.

Rachid Riad, Corentin Dancette, Julien Karadayi, Neil Zeghidour, Thomas Schatz, and Emmanuel Dupoux. Sampling strategies in siamese networks for unsupervised speech representation learning. In *Nineteenth Annual Conference of the International Speech Communication Association*, Hyderabad, India, September 2018.

Odette Scharenborg, Laurent Besacier, Alan Black, Mark Hasegawa-Johnson, Florian Metze, Graham Neubig, Sebastian Stuker, Pierre Godard, Markus Muller, Lucas Ondel, Shruti Palaskar, Philip Arthur, Francesco Ciannella, Mingxing Du, Elin Larsen, Danny Merkx, Rachid Riad, Liming Wang, and Emmanuel Dupoux. Linguistic unit discovery from multi-modal inputs in unwritten languages: Summary of the "speaking rosetta" JSALT 2017 workshop. In *2018 IEEE International Conference on Acoustics, Speech, and Signal Processing (ICASSP)*, Calgary, Canada, April 2018.