



# Jérémie KALFON

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## Profile

Computational Biologist and Engineer. co-Founder of PiPle, I am keen on project management and development. Highly independent, I am interested in improving Genomics & Biomedical research using Data Science and Machine Learning. I am now an Associate at the Broad Institute of MIT and Harvard.

## Skills

- Data Science ●●●●●
- Imaging ●●●●●
- Neuroscience ●●●●●
- Comp. Sci. ●●●●●
- Full Stack dev. ●●●●●
- Maths & Stats ●●●●●
- Genomics ●●●●●
- Electronics ●●●●●
- English ●●●●●
- Team Work ●●●●●

## Education

- Harvard University** CAMBRIDGE, USA 2019-2021  
Graduate Certificate in Biology
- University of Kent** CANTERBURY, UK 2017-2018  
Master of Science. Machine Learning
- ECE Paris** PARIS, FRANCE 2013-2018  
**Tec de Monterey** QUERÉTARO, MEXIQUE 2014  
French Diplôme d'ingénieur, Biomedical Engineering

## Experience

### Broad Institute of MIT and Harvard - Asc. Computational Biologist II

CAMBRIDGE, USA 2019 -

- CCLE (DepMap), Predicting cancer dependencies from genetic sequences of cancer cell lines.  
ML, BIG DATA, GENOMICS
- AMLproject, deciphering AML from deep epigenetic profiling, with Dana Farber Cancer Institute & Boston Children's Hospital  
ML, BIG DATA, GENOMICS

### PiPle - co-Founder - CEO

PARIS, FRANCE 2016 -

- Co-Founder of PiPle, A startup focused on bringing the next generation communication platform. PiPle. INSEEC incubator  
PROJECT DEV, ENTREPRENEUR

### Simons Foundation, Flatiron Inst. - Research Associate

NEW YORK, USA

- Member of the CalmAn project, Neural spike inference from calcium imaging. Flatiron Institute under the supervision of Dmitri Chklovskii  
RESEARCH, IMAGING, ML, VISION 2017

### University of Kent - Master Thesis

- Developed PyCUB, Master Thesis in ML for the analysis of the Codon Usage Bias across kingdoms.  
ML, BIG DATA, RESEARCH, GENOMICS 2017

### HighLife Med - R&D

- Stage à HighLife Med, A Parisian Biomed. Startup developing the world's first no-surgery mitral heart valve replacement.  
SIMULATION, DATA ANALYTICS 2015

## Interests



## Associations

President of NoLarsen music Festival 2016.  
Music Society

HighSchool & College private teacher during 2  
years  
Teaching Society

## Publications

- *A distinct core regulatory module enforces oncogene expression in KMT2A-rearranged leukemia*, J. Kalfon, T. Harada, Y Heshmati, (Preprint) doi: <https://doi.org/10.1101/2021.08.03.454902>, 2021
- *Transcriptional plasticity drives leukemia immune escape*, K Eagle, T. Harada, J. Kalfon, (preprint on request), 2021
- *Repeat expansions confer WRN dependence in microsatellite-unstable cancers*, N. Wietmarschen, S. Sridharan, W. J. Nathan, ..., Nature, 2020.
- *VPS4A is a synthetic lethal target in VPS4B-deficient cancers due to co-deletion with SMAD4*, J. E. Neggers, B. R. Paoletta, A. Asfaw, M. V. Rothberg, T. A. Skipper, Cancer Research, 2020.
- *CalmAn: An open source tool for scalable Calcium Imaging data Analysis*, A. Giovannucci, J. Friedrich, P. Gunn, J. Kalfon, S. Ann Koay, eLife, 2018.  
<https://doi.org/10.7554/eLife.38173>,
- *Hidden Patterns of the Codon Usage Bias across kingdoms*, Y Deng, J. Kalfon, T Von der Harr, D. Chu, RSIF, 2019.  
<https://doi.org/10.1098/rsif.2019.0819>,
- *Master Project, PyCUB, python package for the kingdom-level analysis of the codon usage bias*, 2018  
<https://github.com/jkobject/pycub/blob/master/docs/PyCUB.pdf>,
- *Broad retreat, Poster Session presentation, on the analysis of AML specific super enhancer and AML dependencies*. 2019.  
<https://jkobject.com/projects/predicting-dependencies-from-enhancers/>,

## Side Projects

- *Human Brain Project, 2017 conference, attendee*. 2017
- *VCF2Ancestry, hackaton project, 3 days to predict ancestry from population scale mutation profile*. 2017.  
<https://github.com/jkobject/VCF2Ancestry/>

## Awards

- *ECE innov' Awards, 2nd Place for the PiPle project, innovative Chat app introducing the concept of message-mapping*. 2017
- *Berger-Levrault Innovation Awards, 2nd Place for the PiPle project, innovative Chat app introducing the concept of message-mapping*. 2017