

Tom Dupré la Tour

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Highlights

- **Research scientist:** computational neuroscience, machine learning, signal processing, publications to machine learning conferences (NeurIPS, ICASSP) and neuroscience journals
- **Open-source developer:** scikit-learn core developer, large codebases, advanced numerical optimization, API design, library maintenance, code reviews
- **Data scientist:** data analysis, data visualization, mathematical modeling, large datasets

Experience

- 2019 – present **Postdoc researcher, UC Berkeley, Berkeley, CA, USA**
(4 years)
- Advisor: Jack Gallant
 - Deep-learning-based brain encoding models in vision and natural language
 - Efficient hyper-parameter search on GPU for large multi-target models
 - Taxonomy of V4 neurons modeled with a custom deep-learning model architecture
 - Quantification of individual differences in encoding models using optimal transport
- 2015 – 2018 **Ph.D student researcher, Télécom Paris, Paris, France**
(3.5 years)
- Advisors: Alexandre Gramfort and Yves Grenier
 - Thesis: “Non-linear models for neurophysiological time-series”
 - *Best paper award - 1st prize (Université Paris-Saclay)*
 - *Ph.D thesis award - 1st prize (Club EEA, GRETSI, GdR ISIS)*
 - *“This is technically the most advanced PhD thesis I have ever seen, and the second best doesn’t even come close to it.” (Guido Nolte – dissertation reviewer)*
- 2015 – present **Open-source developer, Scikit-learn**
(8 years)
- Development of scikit-learn, the most popular machine learning library in Python
 - *“Fastest promotion ever to the core developer team.” (Gaël Varoquaux)*
- 2014 – 2014 **Research intern, DxO Labs, Boulogne-Billancourt, France**
(6 months)
- Research on blind deconvolution for motion deblurring in computer vision
 - *Dissertation highlighted for years as exemplary by Pierre Vanderghyest (ÉPFL)*
- 2013 – 2013 **Research intern, Institut d’Électronique Fondamentale, Orsay, France**
(3 months)
- Research on a calculus paradigm using stochastic binary signals
 - *Summa cum laude (top 10% dissertation) (École polytechnique)*

Education

- 2015 – 2018 **Ph.D, computational neuroscience, Télécom Paris, Paris, France**
- 2013 – 2015 **Master of Science, EECS, ÉPFL, Lausanne, Switzerland**
- 2010 – 2013 **Master of Engineering, EECS, École polytechnique (X10), Palaiseau, France**
- 2008 – 2010 **Preparatory school, Lycée Saint Louis, Paris, France**

Expertise

- (9 years) **Software development:** Python, Cython, Git, Bash, Matlab, Javascript
- Data science:** Scikit-learn, Pytorch, Scipy, Matplotlib, Pandas
- Skills:** analysis, formalization, abstraction, fast learning, critical thinking, attention to details, clarity of thoughts, writing, autonomy, mentoring