

**Antoine J.-P. Tixier (short CV)**  
5+ years of experience in data science

antoine.tixier-1@colorado.edu  
webpage: <http://www.lix.polytechnique.fr/Labo/Antoine.Tixier/>

## PROFESSIONAL EXPERIENCE

### 2015-current **ÉCOLE POLYTECHNIQUE, Palaiseau, France**

*Postdoctoral researcher, Computer Science Laboratory, Data Science and Mining Team (DaSciM)*  
Applied researcher within a group developing solutions for clients including Airbus, SNCF, FDJ, the French government...  
Leader of subproject #5 of OpenPaaS::NG (11M€ project): automated text summarization, keyword extraction & recommendation.  
Gained expertise in network analytics, NLP, deep learning, information retrieval, data visualization.  
Publications in top international conferences: ACL'16, EMNLP'16, EACL'17. Supervision of 6 X 3<sup>rd</sup> year students (Spring '16 and '17).

Spring 16/17 *Teaching Assistant, Text mining (undergrad level) & Advanced learning for graph and text data (grad level)*  
(2\*3 months) Topics covered: information retrieval, keyword extraction, document classification, graph-of-words, graph kernels, community detection, identification of influential spreaders in social networks, influence maximization, word embeddings, deep learning for NLP.  
Mission: Weekly 2-hour lab sessions (~30 undergrads, ~80 grads) to illustrate the topics covered in class on real data sets with Python.  
Creation and administration of two Kaggle in-class competitions to evaluate the students.

### 2012-2015 **COLORADO CONSTRUCTION SAFETY LABORATORY, Boulder, USA**

*Graduate Research Assistant on a \$400,000 National Science Foundation (NSF) project*  
Project title: predictive modeling of construction injuries in complex environments. 5 papers in top international research journals.  
NLP, Data Mining and Machine Learning. Data cleaning, diagnostics, and visualization.  
Developed predictive models for major US construction companies: Kiewit, Jacobs, Bentley Systems... Bi-monthly reporting to clients (conf calls, presentations), vulgarization of the results. Collaboration with clients' IT teams to help put my systems into production.

### Spring 2014 **UNIVERSITY OF COLORADO AT BOULDER, USA**

(5 months) *Teaching Assistant, Probability and Statistics (undergraduate level)*  
Topics covered: probability theory, random variables and probability distributions, covariance, stochastic processes, parameter estimation, probability density estimation, confidence intervals, statistical inference, hypothesis testing, regression/correlation analyses.  
Mission: held bi-weekly office hours to help students with homework assignments and the topics covered in class (~ 15 students), replaced instructor when away, 6 times throughout the semester (~ 85 students). Designed and graded midterms and finals.

### 2011 **ARTIS CONSTRUCTION, Paris area, France**

(4 months) *Junior Site Manager, construction of two office buildings for 12M€*

### 2010 **CITY OF MONTREAL, Quebec, Canada**

(2 months) *Junior City Engineer, "Le Sud-Ouest" district*

**COMPUTER SKILLS**  
R, Python, R Shiny, Spark,  
cluster computing, parallel  
processing, LaTeX, HTML  
Win/Unix

## EDUCATION

**LANGUAGES**  
English: fluent  
French: native

### 2013-2015 **UNIVERSITY OF COLORADO AT BOULDER, USA**

*PhD, Civil Engineering. Statistical data analysis and risk modeling. GPA: 3.95/4.00*  
Program ranked 9th out of 145 in the US. Supervised learning: CART, Bagging, Random Forest, Boosting, SVM...  
Unsupervised learning: PCA, K-means, K-nn, hierarchical clustering...  
Bivariate risk analysis, stochastic simulation, logistic/nonparametric regression, time series analysis

### 2011-2013 **UNIVERSITY OF COLORADO AT BOULDER, USA**

*MS, Civil Engineering, Construction Engineering & Management. GPA: 3.88/4.00*

### 2009-2011 **ÉCOLE SPÉCIALE DES TRAVAUX PUBLICS (ESTP), Paris, France**

*Master's degree, Mechanical & Electrical Engineering. Merit-based selection for the double-degree program with CU Boulder.*

### 2007-2009 **LYCÉE SAINTE-MARIE, Antony, France**

*Classes préparatoires MPSI-MP: intense training in Math and Physics*

**OTHER INTERESTS**  
Tennis: 2011 regional vice-  
champion (Paris) with ESTP  
team, 1<sup>st</sup> division.  
IT: Colorado Construction  
Safety Laboratory website  
maintainer (2012-2015)

## MERIT-BASED HONORS AND AWARDS

Spring 2014 Best Teaching Assistant Award, Civil Engineering Department, CU Boulder  
June 2013 Best Conference Paper Award, 120<sup>th</sup> American Society of Engineering Education (ASEE) Annual Conference, Atlanta, GA  
April 2013 Doctoral Assistantship for Excellence Award, Civil Engineering Department, CU Boulder. Highest level of support offered by the department.