

## Edouard FOUCHÉ

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# Machine Learning Researcher

## Summary

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I am a french engineer and a Ph.D. candidate in Machine Learning at the Karlsruhe Institute of Technology (KIT), under the supervision of Prof. Dr.-Ing. Klemens Böhm. I hold a master's degree in Computer Science from KIT and a master's degree in Engineering from ESIEE Paris. I wrote my master's thesis at IBM Research & Development, where I contributed to open source projects.

My research focuses on :

- Unsupervised Learning in High-Dimensional Data Streams
- Feature Selection / Feature Engineering
- Outlier Detection
- Correlation Analysis

## Experience

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### From 11/16 to now: Researcher at KIT

Preparing my doctorate thesis in the field of Machine Learning under the supervision of Prof. Dr.-Ing. Klemens Böhm. Teaching graduate/undergraduate seminars. Supervision of students' master thesis. Participation in various teaching activities at the chair and examinations.

### From 04/15 to 10/16: Graduate Research Intern at IBM Deutschland

Creation and development of *ibmdbpy*, an open-source Python interface for data manipulation and in-database algorithms in IBM dashDB and IBM DB2. Accelerating Python Analytics by seamlessly pushing operations into the underlying database for execution to benefit from in-database performance-enhancing features. Publication and talk at LWA15 in Trier.

Writing my master's thesis on the top of the project. Focus on mapping Feature Selection algorithms to high dimensional data sets. Maintenance, improvement and integration of the work of fellow interns into the project. Talk at PyData Berlin 2016.

### From 10/15 to 07/16: Teaching Assistant in CRM & Data Mining at KIT

Teaching Customer Relationship Management (Winter term 15/16) at KIT for undergraduate students. Giving a presentation every two weeks. Preparation of slides and assignments.

Teaching assistant in the Data Mining Lab (Summer term 16) at KIT for a group of 24 students in the participation to a data mining contest. Weekly Meetings with the students. Organized a field trip at IBM Lab.

## Education

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**2013-2016** M.Sc. in Computer Science at Karlsruhe Institute of Technology (KIT)  
Specialization: Cognitive Systems and Machine Learning  
**Graduated with 1.4 - German GPA (Very Good)**

**2010-2015** M.Sc. in Engineering at ESIEE PARIS  
Specialization: Computer Science  
**Graduated with highest honours and special distinction**

**2010-2013** B.Sc. in Mathematics/Computer Science at Paris-Est MLV University  
**Graduated with highest honours**

**2007-2010** High school Notre-Dame Providence, Enghien-les-Bains, France  
**High school diploma with highest honours**

## Skills

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<b>Languages:</b>	French - Native speaker English - Full professional proficiency German - Full professional proficiency Currently learning Spanish
<b>Computer Science:</b>	Data Mining, Neural Networks (Very good knowledge) Python, R (Very good knowledge) Scala, Spark, SQL (Good knowledge) Algorithms, Databases (Good knowledge)
<b>Also familiar with:</b>	Adobe CS6, IBM SPSS, Git, Web development, Agile Software Development, CRM, Entrepreneurship, Cognitive Systems and Distributed Computing.

## Project & Activities

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**2016 – 2017:** Started blogging at <https://edouardfouche.com>

**2015:** Member of the college group “Machine Learning Karlsruhe”

### **2014: DATA MINING CUP**

Each year about 100 educational institutions from over 25 countries take part in the DATA MINING CUP competition, which is organized by Prudsys AG, one of the leading data mining companies. In context of a practical course at KIT ("Analyzing Big Data") I participated in a team of master's students at KIT in this contest and reached the second place worldwide.

### **2013: SPOT'N'FLASH**

Developing an online platform, whose aim was to foster human contact between persons. I managed a team of seven people to develop a prototype in three months using agile methods. We developed a complete web interface and three native mobile apps for iPhone, Android and Windows Phone.

**2010 – 2013:** Founder of ESIEE Photographic Club

## Honors & Awards

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**2015** - Outstanding International Academic Career - "Parcours d'excellence" ESIEE PARIS 2015

**2014** - DATA MINING CUP 2014, Prudsys AG: 2<sup>nd</sup> place worldwide

**2012** - Descartes Photographic Campus Contest: 1<sup>st</sup> place

**2011** - Best Management Project – ESIEE PARIS

## Personal interests

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Piano, silver and digital photography, travelling, trekking.

Photo gallery: <https://flickr.com/edouardf/>

LinkedIn: <https://linkedin.com/in/edouardfouche>

More information about me: <https://edouardfouche.com>