

Edouard Fouché

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Data Mining / Machine Learning Expert

Summary

I am a French engineer and a Ph.D. candidate in Data Mining 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. My research focuses on:

- Unsupervised Learning in High-Dimensional Data Streams
- Correlation Analysis
- Bandit Algorithms
- Outlier Detection / Clustering

Experience

From 11/16 to now: Data Mining Researcher at KIT

Preparing my doctorate thesis in the field of Data Mining under the supervision of Prof. Dr.-Ing. Klemens Böhm. Supervision of students' thesis. Participation in teaching activities at the chair: Data Mining lab course and oral/written examinations. Member of the DFG Research Training group 2153: "[Energy Status Data - Informatics Methods for its Collection, Analysis and Exploitation](#)". (See **Selected Publications**)

From 04/15 to 10/16: Graduate Research Intern at IBM R&D

Creation and development of *ibmdbpy*, an open-source Python interface for data manipulation and in-database algorithms in IBM dashDB and IBM DB2. Talk at LWA15 in Trier and PyData Berlin 2016.

Education

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|------------------|--|
| 2016-2020 | Ph.D. in Data Mining at Karlsruhe Institute of Technology (KIT)
Expected Graduation: Q4 2020 |
| 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 |

Skills

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

Selected Publications

2019 - Monte Carlo Dependency Estimation.

E. Fouché & K. Böhm, Proceedings of the 31st International Conference on Scientific and Statistical Database Management (SSDBM '19), July 23–25, 2019, Santa Cruz, CA, USA. **Best Paper Award.**

2019 - Scaling Multi-Armed Bandit Algorithms.

E. Fouché, J. Komiyama & K. Böhm, Proceedings of the 25th ACM SIGKDD Conference on Knowledge Discovery and Data Mining (KDD '19), August 4–8, 2019, Anchorage, AK, USA.

2019 - Unsupervised Artificial Neural Networks for Outlier Detection in High-Dimensional Data.

D. Popovic, E. Fouché & K. Böhm, Proceedings of the 23rd European Conference on Advances in Databases and Information Systems (ADBIS '19), September 8–11, 2019, Bled, Slovenia.

2019 - Reducing Energy Time Series for Energy System Models via Self-Organizing Maps.

H. Yilmaz, E. Fouché, T. Dengiz, L. Krauß, D. Keles & W. Fichtner. Abstract/Preprint on demand.

Extracurricular Projects & Activities

2019: Member of a Roller Derby League (rockARollers). Promoting gender equality and non-discrimination.

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. I participated in a team of master's students at KIT in this contest, and the team reached the second place worldwide.

2010 – 2013: Founder of ESIEE Photographic Club

Honors & Awards

2018 - Selected participant in the [Software Campus](#) program

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

2014 - DATA MINING CUP 2014, Prudsys AG: 2nd place worldwide

2012 - Descartes Photographic Campus Contest: 1st place

Personal interests

Piano, silver and digital photography, travelling, trekking, roller derby.

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

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

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

I am available for a new position from 11/2020 - 01/2021.