Edouard Fouché, PhD, MBA



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EXPERTISE

Data Science / Data Mining Machine Learning Artificial Intelligence Algorithms, Programming

PROGRAMMING

Visualization, Big Data

Python (~7 years), sklearn etc. **Scala** (~4 years), Spark **R** (~3 years) Also: Java, SQL, Bash, C, Web...

SOFTWARE

Git, Linux, MacOS, Databases, LaTeX, Adobe, MS Office

SOFT SKILLS

Research, Teaching Leadership

Stakeholder Management Agile Development Cultural Awareness Dedication, Commitment

LANGUAGES

French (Native) English (Fluent, C2) German (Fluent, C2)

INTERESTS

Photography (> 12 years) Hiking, Travels, Cooking, Roller Derby, Fitness

Researcher Data Science / ML / AI

SUMMARY

I am a postdoctoral researcher in data science at the Karlsruhe Institute of Technology (KIT), where I lead my own team with four PhD candidates and several graduate and undergraduate students. I am responsible for the Data Science lectures (1+2) at KIT. I have 7+ years experience developing scientific software for data analysis. I like to invent new and scalable algorithms. I have advised 15+ students for their Master/Bachelor's theses and conducted multiple projects with major industry actors (such as Daimler, BMW, IBM, SAP ...).

Experience

09/22-04/23 Visiting Researcher, Kyoto University.

- o Visiting Shimodaira-Honda Lab, Prof. Junya Honda, Kyoto University.
- o Research on non-stationary bandit algorithms, decoupled bandits, RL.
- o Funded by Helmholtz Doctoral Prize Travel Grant.

2020-now Senior Researcher & Lecturer, Karlsruhe Institute of Technology (KIT).

- o Conducting independent research, collaborations and student theses.
- o Co-supervision of 4+ doctoral students. Responsible for Data Science lectures.
- o Organizer for chair-wide meetings, coaching and mentoring.
- Elected member of faculty council and KHYS steering committee member.

09/19-12/19 Visiting Researcher, University of Illinois Urbana-Champaign.

- o Visiting the Data Mining Group, Prof. Jiawei Han, UIUC.
- Research on outlier detection from text data (published at ICDM2020).
- o Funded by DFG Research Training Group 2153: "Energy Status Data".

2016-2020 Researcher & Ph.D. Candidate in Data Science, KIT.

- o Published 8 peer-reviewed research papers and a doctoral thesis.
- o Advised 10+ student theses (Master/Bachelor level).
- Worked with 2 research labs (international) and 5 industry partners.

2015-2016 Working student, IBM R&D GmbH, Böblingen.

- o Created ibmdbpy, an open-source interface between Python and DB2.
- o Writing my Master's thesis in collaboration between KIT and IBM.
- o Co-supervision of two fellow interns. Python coaching.

EDUCATION

2020-2021 MBA, Quantic School of Business and Technology. (fka "Smartly")

- o Online, 7% admission rate. Graduated with honors (top 10% of cohort).
- \circ Accounting, Economics, Data & Decisions, Leading Organizations, Marketing, Finance, Supply Chain & Operations, Strategy, Entrepreneurship.

2016-2020 Ph.D. (Dr.-Ing.) in Data Science, KIT.

- o Thesis: Estimating Dependency, Monitoring and Knowledge Discovery in High-Dimensional Data Streams. (Advisor: Prof. Klemens Böhm)
- o Summa Cum Laude (top 10%). Helmholtz Doctoral Prize. German GPA: 1.0

2015-2016 M.Sc. Computer Science, KIT.

- o Thesis: Fast In-Database Feature Selection. (Advisor: Prof. Emmanuel Müller)
- o German GPA: 1.4 (Very Good)

2010-2015 Diplôme d'Ingénieur (Dipl.-Ing.), ESIEE Paris, France.

- o Major: Computer Science. Final internship at IBM R&D (6 months).
- o "Félicitations du Jury" and "Parcours d'Excellence" award.

Awards

2021	The program supports outstanding researchers. It includes research funding of 150K€ for up to 3 years and trainings.
2020	Helmholtz Doctoral Prize. 5K€ cash prize + 12K€ travel scholarship The Helmholtz Association is the largest german scientific organisation.
2019	SSDBM Best Paper Award. Paper: Monte Carlo Dependency Estimation
2017	Software Campus Member: 100K€ research grant, training, mentoring.
2015	Parcours d'Excellence ESIEE Paris. Top 1% of the cohort.

List of Publications

Please see my Google Scholar profile: https://scholar.google.com/citations?user=UUTBItQAAAAJ

Service

- Program Committee (PC) member / Reviewer:
 - ACM SIGKDD 2021, 2022 (ACM Special Interest Group on Knowledge Discovery and Data Mining)
 - IJCAI 2021, 2022 (International Joint Conference on Artificial Intelligence)
 - IEEE ICDM 2021, 2022 (IEEE International Conference on Data Mining)
 - SIAM SDM 2022 (SIAM International Conference on Data Mining)
 - ECML PKDD 2022 (European Conference on Machine Learning)
- 5-7 October 2022, AI-Hub Karlsruhe: Organized with my colleague Cihan Ates the first edition of a 3-day long networking event around AI and its applications at KIT, see https://ai-hub-karlsruhe.github.io/
- April 2021 now: Steering Committee Member: Karlsruhe House of Young Scientists (KHYS) at KIT
- October 2021 now: Elected at the council of the KIT-Faculty of Computer Science ("Fakultätsrat")
- 2019 2021: Roller Derby Coach for new skaters at Roller Derby Karlsruhe
- 2010 2014: Founder and president of ESIEE Paris' Photo Club

References (title, name, institution, relation, email)

- Prof. Klemens Böhm, KIT. PhD advisor, current employer, co-author. klemens.boehm@kit.edu
- Assistant Prof. Junpei Komiyama, NYU. PhD thesis reviewer, co-author. junpeikomiyama@gmail.com
- Florian Kalinke, KIT. PhD student advised by me, co-author. florian.kalinke@kit.edu