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FARIED**ABU ZAID**

EDUCATION

2016 **Computer Science**
Dr. rer. nat. · RWTH Aachen

2010 **Computer Science**
Diploma · RWTH Aachen

2003 **General University Entrance Qualification**
Abitur · Anne Frank Gesamtschule

PROFESSIONAL EXPERIENCE

2020– **Senior AI Researcher**
Transferlab · appliedAI

Projects and Responsibilities:

- **Uniformly Scaling Flows (Research Program)**: Investigated theoretical and practical benefits of uniformly scaling (normalizing) flows with applications in neuro-symbolic verification and anomaly detection. Collaboration with TU Dortmund (Prof. Neider - verification, Prof. Müller - anomaly detection)
- **Hybrid Car Optimization**: Led the development of an hybrid car engine usage optimizer based on historical user data (probabilistic modeling, combinatorial optimization, cloud deployment)
- **Virtual Extruder**: Prediction and optimization of rheologic properties of extrusion profiles (deep learning, first-order optimization, cloud deployment)
- **Courses**: Developed courses on Explainable AI, Bayesian Methods, and Anomaly Detection. Trained 100+ ML engineers
- **Team Lead**: Led a team with focus on uncertainty quantification (2 researchers, 1 phd student)
- **Phd Supervision**: Supervision of a Phd student working on simulation based inference for material design (jointly with BMW and University of the Bundeswehr)

2018–2019 | **Lead Data Scientist**
AI for Data Management · Camelot Consultants

Projects and Responsibilities:

- **Material Sheet Data Extraction**: Led development of a semi-automatic information extraction system for retrieving technical features from material sheets
- **Supply Chain Scenario Mining**: Directed extraction and semantic clustering of country-specific production scenarios for a large pharmaceutical company (>€20B annual revenue)
- **Team Lead**: Lead a team consisting of a junior data scientist and multiple student assistants

2015–2018 | **Postdoctoral Researcher**
Automata and Logic · TU Ilmenau

Research Highlight:

- **Uniformly Automatic Classes**: Developed uniformly automatic classes with applications in combinatorial number theory, verification, and parameterized complexity theory

2011–2015 | **Research Assistant**
Mathematical Foundations of Computer Science · RWTH Aachen

Research Highlight:

- **Dissertation**: Solved three long-standing open questions posed by prominent researchers (Michael O. Rabin, Saharon Shelah, Martin Grohe)

Coding Skills

Programming languages	Python (6+ years)
Libraries	Torch, Pyro, Scikit-learn, Statsmodels, Alibi, SBI, pyDVL, Ray, WandB…
Cloud services	GCP, OpenShift, AWS, GitHub…
Coding Reference	https://github.com/aai-institute/USFlows
Other languages	Java, C/C++, Haskell, OCaml (past experience)

SCIENCE COMMUNICATION

Author at Transferlab	https://bit.ly/40LYWUO
Video lectures	https://bit.ly/4jKUs9C

PROFESSIONAL MEMBERSHIPS

Since 2020 | Association for Computing Machinery

LANGUAGES

German	Native speaker
English	Fluent
Arabic	A1 (currently learning)

LECTURING

2023–	**Methods and Issues in Explainable AI** Transferlab · appliedAI Institute
2021–	**Introduction to Bayesian Methods in Machine Learning** Transferlab · appliedAI Institute
2020–	**Practical Anomaly Detection** Transferlab · appliedAI Institute

UNIVERSITY LECTURING

2017/18	**Automata Theory** Computer Science · TU Ilmenau
2016	**Logic and Logic Programming** Computer Science · TU Ilmenau
2015	**Automata, Languages, Complexity** Engineering Informatics · TU Ilmenau

GRANTS & AWARDS

2024–2025	Bavarian research grant: Baviarian AI Act Accelerator
2016	Computer Science PhD: magna cum laude
2012–2015	DFG Research Grant: Automatic Structures
2010	Computer Science Diploma: Graduated with honors

Hobbies & Interests

Music	Electric guitar, ukulele, electric bass
Sports	Climbing, swimming, hiking, mountain biking
Other	Traveling, cooking

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