

Ahmad Aloradi

SIGNAL PROCESSING ENGINEER · DEEP LEARNING AND AUDIO PROCESSING EXPERT

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Education _____

Ph.D. in Signal Processing

FRIEDRICH-ALEXANDER-UNIVERSITÄT ERLANGEN-NÜRNBERG (FAU) - DEPARTMENT OF DATA SCIENCE

Oct. 2024 - Ongoing

- Topics: Adversarial and Domain Shift Robustness for Speaker Recognition
- Advisors: Prof. Dr. Daniel Tenbrinck, Akad. Rat and Prof. Dr. ir. Emanuel Habets

M.Sc. in Signal Processing

Erlangen, Germany

Oct. 2017 - Oct. 2020

• Grade: 1.5 (Very Good)

- Thesis: End-to-End Text-Independent Speaker Verification Using Deep Metric Learning
- Thesis advisors: Dr. Wolfgang Mack and Prof. Dr. ir. Emanuel Habets

B.Sc. in Electrical Engineering

Dhahran Saudi Arabic

Jan. 2013 - Jun. 2017

KING FAHD UNIVERSITY OF PETROLEUM AND MINERALS (KFUPM)

FRIEDRICH-ALEXANDER-UNIVERSITÄT ERLANGEN-NÜRNBERG (FAU)

- Cumulative GPA: 3.77/4.0 (First Honors)
- Thesis: Optical Mouse-Based Odometer and Motion Tracker

Experience ____

Research Associate Erlangen, Germany

FRAUNHOFER IIS Apr. 2021 - Present

- Member of the text-to-speech TTS team, which has been developing a multi-lingual, enterprise-grade TTS system
 - Allowing for **zero-shot** inference
 - Improving the speaker similarity between the reference human voice and synthesized speech
 - Experience in maintaining and delivering software to customers as Docker images

PhD Work in Robust Speaker Recognition Using Deep Neural Networks

Erlanaen, Germany

INTERNATIONAL AUDIOLABS - FAU

Apr. 2021 - Jul. 2023 (incomplete)

- Developing robust speaker recognition and detection systems in multi-talker environments using deep neural networks
 - **Lead-author** for two peer-reviewed publications (publications section)
 - Supervised 2 master students in the Audio Processing Seminar

Research Assistant Erlangen, Germany

• Research assistant in the domain of speaker verification

- Used contrastive learning methods (mainly triplet loss) to build a verification system with equal error rate ≈ 6%

Student Assistant (Werkstudent)

Erlangen, Germany

Oct. 2020 - Mar. 2021

FRAUNHOFER IIS

FRAUNHOFER IIS

Mar. 2018 - Feb. 2020

• Working student in the domain of speech dereverberation. Implemented a novel algorithm for online dereverberation in a VST Plugin (based on multi-channel linear prediction).

Graduate Teaching Assistant (Werkstudent)

rlangen, Germany

Friedrich-Alexander-Universität Erlangen-Nürnberg (FAU)

Oct. 2018 - Feb. 2019

- Lab assistant for the 'Machine Learning in Signal Processing' at the LMS department (master level course)
- Assisted the students throughout in creating an end-to-end pipeline for lane-detection, including data-simulation and *U-Net*-like model training

Undergraduate Teaching Assistant

Dhahran, Saudi Arabid

KING FAHD UNIVERSITY OF PERTOLEUM AND MINERALS (KFUPM)

Sep. 2014 - May. 2017

• Took over the role the teaching assistant for 5 different courses in the Electrical Engineering Dept.



Programming Python (Expert), MATLAB,. C/C++ (Beginner), shell-scripting

Machine Learning PyTorch (Expert), PyTorch Lightning (Expert), Numpy, Scikit-learn, Pandas, logging (Tensorboard, Weights & Biases,

MLflow), Docker

Operating Systems Microsoft Windows, Linux, Mac

Others Git, continuous integration (CI), High-performance computing (HPC) experience with slurm/torque workload managers,

ETFX, Beamer, TikZ, Microsoft Office

Languages English (Native-level), Arabic (Native), German (Telc B1 - 284/300)

Soft skills Good communication and public speaking skills: former vice-chairman in the IEEE student branch at KFUPM

Publications _____

CONFERENCE PAPERS

Ahmad Aloradi, Ünal Ege Gaznepoglu, Emanuël A. P. Habets, Daniel Tenbrinck *VoxATack: a Multimodal Attack on Speaker Anonymization Systems*, WASPAA, Lake Tahoe, Oct. 2025

Ünal Ege Gaznepoglu, Anna Leschanowsky, **Ahmad Aloradi**, Prachi Singh, Daniel Tenbrinck, Emanuël A. P. Habets, Nils Peters *You Are What You Say: Exploiting Linguistic Content for VoicePrivacy Attacks*, Interpseech, Rotterdam, Aug. 2025

Ahmad Aloradi, Wolfgang Mack, Mohamed Elminshawi, Emanuël A. P. Habets, *Speaker Verification in Multi-Speaker Environments Using Temporal Feature Fusion*, EUSIPCO, Belgrade, Aug. 2022

Ahmad Aloradi, Mohamed Elminshawi, Srikanth Raj Chetupalli, Emanuël A. P. Habets, *Target-Speaker Voice Activity Detection in Multi-Talker Scenarios: An Empirical Study*, ITG, Aachen, Sep. 2023

Honors & Awards

2017 **2nd Best Thesis**, Awarded the 2nd best thesis in the Electrical Engineering Dept. at KFUPM

2013 **Full-Undergraduate Scholarship,** Awarded to outstanding non-Saudi high school graduates

Saudi Arabia Saudi Arabia