

AYOUB MALEK

Electrical engineer & Software developer

Tunisian & German 🇹🇿 🇩🇪

Driving licence type B 🚗

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[Ayoub Malek's blog](#) [in LinkedIn/Ayoub Malek](#) [Github/SuperKogito](#) [orcid.org/0000-0002-9008-7562](#) [Stackoverflow/SuperKogito](#)

FIELDS OF KNOWLEDGE

Digital signal processing Machine learning Data processing
Optimization problems Software development

EXPERIENCE

Audio signal processing developer [Huawei Technologies Co., Ltd.](#)
Mar 2023 - Today Munich, Germany

Python Assembler C C++

Machine learning engineer [Yoummday GmbH](#)
Sep 2019 - Feb 2023 Munich, Germany

- Develop an emotions recognition system to monitor clients satisfaction.
- Maintain, develop and accelerate the existing speech recognition system.
- Build monitoring tools for Windows operating system.

Python C++ Emotions recognition Voice verification Speech recognition
Data augmentation Supervised learning Multi-processing Scalability

INTERSHIPS

Software developer [Yoummday GmbH](#)
Working student Jun 2018 - Nov 2018 Munich, Germany

- Develop a voice authentication system to detect fraudulent connections.
- Process & visualize large audio data and generate a training & testing database.

Python Speaker authentication/ Verification Mel Frequency Cepstral Coefficients
Gaussian Mixture Models

Embedded security developer [blik GmbH](#)
Research internship Aug 2017 - Nov 2017 Munich, Germany

- Secure communications in a sensors network (TI cc2650 sensors & RPi broker)
- Implement symmetric encryption (AES-128) and hashing algorithms (SHA-256).

C Python Raspberry Pi Authenticated encryption Contiki OS MbedTLS

GUI designer & developer [eCARus, Technical University of Munich](#)
Engineering internship Aug 2014 - Oct 2014 Munich, Germany

- Develop an informative android app & Translate the Typo3 webpages to English.
- Develop the Elektrobitt-app GUI with dual-language (EN / DE) feature.

Android java Elektrobitt Design tools Typo3 Foreign languages

ACTIVITIES AND LEADERSHIP

Founder & core developer [urlstechie](#) Online
Mar 2020 - Today [urlstechie](#) is an online project providing urls checking tools. [urlchecker-GitHub-action](#) & [urlchecker-Python-package](#) (downloads > 20k)

Open source contributor [GitHub](#) Online
Jan 2019 - Today Core developer of [spafe](#) (downloads > 30k). Core developer of [pydiogment](#) (downloads > 10k). Contributor to different projects such as: [librosa](#), etc.

Mentor [MIX program, Technical University of Munich](#) Munich
Oct 2016 - Aug 2017 MIX Program = Mentoring for International Exchange Students. Assist exchange students during their time at the TUM.

Treasurer [Tuniesische Akademiker Gesellschaft, TAG e.V](#) Munich
Oct 2013 - Jul 2014

PUBLICATIONS

- Malek, Ayoub (2023). "Spafe: Simplified python audio features extraction". In: *Journal of Open Source Software* 8.81, p. 4739. DOI: 10.21105/joss.04739.

EDUCATION

M.Sc. in Electrical Engineering and Information Technology
B.Sc. in Electrical Engineering and Information Technology
[Technical University of Munich](#) Sep 2013 - Jul 2019

- Master Thesis at [Rohde & Schwarz](#): Antenna Array Diagnosis Using Phaseless Near-Field Data. **Master thesis grade = 1.3**

Antenna testing data processing machine learning 5G

- Bachelor Thesis at [TUM/LMT](#): Simulation Tool for WiFi Based Localization. **Bachelor thesis grade = 1.0**

WiFi-based indoor localization Simulation Matlab

Deutsche Sprachprüfung für den Hochschulzugang (DSH)
Feststellungspruefung (FSP)

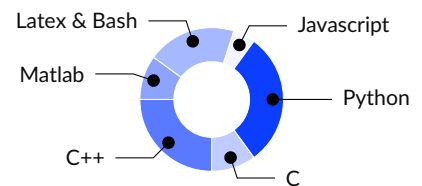
[Heidelberg University](#) Sep 2012 - Jun 2013
German language

High School Graduation Diploma
[Lycée pilote Monastir](#) Sep 2008 - Jun 2012

- Specialization Area: Technology (technical diploma),
- Grade = 1.3: **Top 15 best Tunisian students in 2012 - government scholarship to study in Germany (with DAAD supervision)**

technical baccalaureate

PROGRAMMING LANGUAGES



Python: Top 15% on [Stackoverflow.com/superkogito](#)

C, C++
Bash
Matlab
Javascript

OPERATING SYSTEMS

Linux Windows 7, 10

FRAMEWORKS



LANGUAGES

Arabic English German French

REFERENCES

- Several are available upon request.