



AYOUB MALEK

Electrical engineer & Software developer

Tunisian & German 
Driving licence type B 

@superkogito@gmail.com

[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 Elektrobit-app GUI with dual-language (EN / DE) feature.

Android java Elektrobit Design tools Typo3 Foreign languages



ACTIVITIES AND LEADERSHIP


Mar 2020 - Today

Founder& core developer  **urlstechie**  Online



 **urlstechie** is an online project providing urls checking tools. [urlchecker-GitHub-action](#) & [urlchecker-Python-package](#) (downloads > 20k)


Jan 2019 - Today

Open source contributor  **GitHub**  Online



 Core developer of [spafe](#) (downloads > 30k).
Core developer of [pydiogment](#) (downloads > 10k).
Contributor to different projects such as: [librosa](#), etc.


Oct 2016 - Aug 2017

Mentor  **MIX program, Technical University of Munich**  Munich

 MIX Program = Mentoring for International Exchange Students.
Assist exchange students during their time at the TUM.

Oct 2013 - Jul 2014





Treasurer  **Tunesische Akademiker Gesellschaft, TAG e.V.**  Munich









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

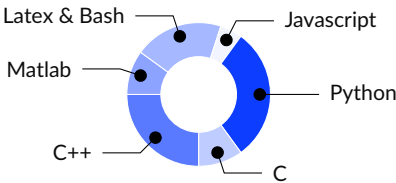
- Master Thesis at **Rohde & Schwarz**: Antenna Array Diagnosis Using Phaseless Near-Field Data.  **Master thesis grade = 1.3**
Antenna testing data processing machine learning 5G
- Bachelor Thesis at **TUM/LMT**: Simulation Tool for WiFi Based Localization.  **Bachelor thesis grade = 1.0**
WiFi-based indoor localization Simulation Matlab

 **Deutsche Sprachprüfung für den Hochschulzugang (DSH)**
 **Feststellungspruefung (FSP)**
 **Heidelberg University**  Sep 2012 – Jun 2013
German language

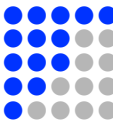
 **High School Graduation Diploma**
 **Lycée pilote Monastir**  Sep 2008 – Jun 2012

- 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



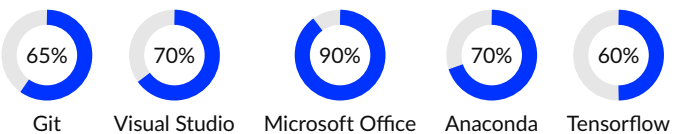
Python: Top 15% on [Stackoverflow.com/superkogito](#)
C, C++
Bash
Matlab
Javascript



OPERATING SYSTEMS

 Linux  Windows 7, 10

FRAMEWORKS



LANGUAGES

Arabic  English 
German  French 

REFERENCES

- Several are available upon request.