






# Ahmed ALMIJBARI

## Elite MSc in Neuroengineering

 [ahmedalmijbari.github.io](https://github.com/ahmedalmijbari)    [ahmed.almijbari@tum.de](mailto:ahmed.almijbari@tum.de)    [AhmedAlmijbari](#)    +49 163 1952422  
 Mittenwalder Straße 2 • 82467 Garmisch-partenkirchen, Germany

### EDUCATION

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Dec 2023 **Elite MSc in Neuroengineering**, Technical University of Munich. (with Honours)  
Jul 2017 **BSc in Electrical Engineering**, University of Benghazi. (3.95 out of 4).

### EXPERIENCE

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| Dec 2023<br>Nov 2022 | <b>Research Assistant, KLINIKUM RECHTS DER ISAR DER TU MÜNCHEN, Munich</b><br>Department of Diagnostic and Interventional Neuroradiology <ul style="list-style-type: none"><li>➢ Implemented advanced data science and signal processing techniques to analyze brain data for 24 subjects, containing 160M time series signals, revealing novel patterns in brain activity through functional MRI.</li></ul>   |
| Aug 2023<br>Feb 2023 | <b>Research Intern, THE NEUROIMAGING CENTER AT THE TECHNISCHE UNIVERSITÄT MÜNCHEN, Munich</b><br>Dynamics of Brain Connectivity Lab <ul style="list-style-type: none"><li>➢ Investigated neural information processing during cognitive function emergence, implementing large-scale Energy Landscape modeling and data analysis methods on 20+ gigabytes of data, performing statistical and computational analysis on over 800k data points.</li></ul> |
| Jul 2023<br>May 2023 | <b>Summer Intern, UNIVERSITY OF OXFORD, Oxford</b><br>Oxford Machine Learning Summer School - MLx Health <ul style="list-style-type: none"><li>➢ Engaged in rigorous 43 hours of coursework, 12 hands-on workshops, and a five-team-member collaborative project in healthcare at the distinguished Oxford Machine Learning Summer School, deepening the understanding of advanced ML concepts and methodologies.</li></ul>                              |
| Oct 2021<br>May 2021 | <b>Research Intern, TECHNICAL UNIVERSITY OF MUNICH, Munich</b><br>Ondracek Lab <ul style="list-style-type: none"><li>➢ Engineered and deployed a state-of-the-art real-time detection and stimulation system to identify and modulate sharp wave ripples with a success rate of more than 97% and a low latency of under 20ms.</li></ul>   |
| Dec 2018<br>Sep 2017 | <b>Teacher Assistant, UNIVERSITY OF BENGHAZI, Benghazi</b> <ul style="list-style-type: none"><li>➢ Facilitated and taught +50 tutorial lectures on Electromagnetic Theory and Digital Communications, enhancing 100+ students' understanding and engagement.</li><li>➢ Collaborated on four Signal Processing and Machine learning projects, contributing to developing innovative graduate dissertations.</li></ul>                                     |
| Nov 2017<br>Aug 2017 | <b>RF Engineer, MANART ALMUTAWASIT COMMUNICATIONS, Benghazi</b> <ul style="list-style-type: none"><li>➢ Managed Drive-Test processes for the Nokia H+ project, ensuring optimal network performance and quality of 50+ sites.</li><li>➢ Played a key role in post-processing data field analysis, delivering valuable insights and weekly reports for network optimization and enhancement to the vendor.</li></ul>                                      |
| Sep 2017<br>Jul 2017 | <b>Summer Intern, ALMADAR ALJADID, Tripoli and Benghazi</b> <ul style="list-style-type: none"><li>➢ Selected as one of the top 30 university students nationwide to participate in the prestigious R&amp;D department's annual internship program.</li></ul>   |

## SKILLS

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| <b>Programming</b>   | Python - MATLAB - Julia  |
| <b>Computational</b> | <b>Machine Learning &amp; Data Science</b> (Numpy - Pandas - Scikit-learn - TensorFlow - Pytorch)<br><b>Neuroimaging</b> (FSL - SPM)<br><b>Software Engineering</b> (Test Driven Development (TDD) "Google Test" - Version Control "Git" - CI/CD - CMake - $\LaTeX$ - Linux) |
| <b>Mathematical</b>  | Signal Processing - Large-scale Modelling and Data Analysis - Machine Learning - Probability Theory and Statistics - Dynamical Systems - Numerical Methods - Information Theory  |
| <b>Engineering</b>   | Arduino - TEMS - ACTIX Analyzer - Multisim - Logic design - Oscilloscope   |

## CIVIL SOCIETY ACTIVITIES

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| Dec 2018<br>Jan 2018 | <b>Scientific Coordinator, TANAROUT ORGANIZATION, Benghazi</b> <ul style="list-style-type: none"><li>&gt; Co-founded and led the Science Club, giving weekly talks and organizing discussions about engineering and scientific topics.</li></ul>   |
| Dec 2017<br>Jan 2017 | <b>Co-founder, BUILDING READERS PROJECT, Benghazi</b> <ul style="list-style-type: none"><li>&gt; Developed and Executed a comprehensive reading program for the top 50 students in Benghazi, completing 30 books, preparing seven engaging activities and workshops, achieving four coursework assignments, and delivering four presentation stages.</li></ul> |
| Dec 2018<br>Oct 2015 | <b>Board Member, RUGBY2018 PROJECT, Benghazi</b> <ul style="list-style-type: none"><li>&gt; Promoted sport and rugby for social peace, aiming to form a conscious young generation, resulting in 881 players, 28 Championships, and 24 workshops.</li></ul>  |
| May 2012<br>Apr 2011 | <b>Co-founder and IT manager, LIBYA ALWATAN MEDIA FOUNDATION, Benghazi</b> <ul style="list-style-type: none"><li>&gt; Managed the IT department for 50+ members, five newspapers and a radio station during the Libyan up-spring.</li><li>&gt; Directed and designed 20+ Libya Alwatan Newspaper and Alhawraa Magazine issues.</li></ul>                       |

## DISTINCTION

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| <b>Research Excellence Certificate</b> | <b>Elite Network of Bavaria</b><br>The Bavarian State Ministry of Science and the Arts initiative to support the outstanding talents at Bavarian universities.   |
| <b>Scholarship Holder</b>              | <b>Rheinstahl Stipendium</b><br>The Rheinstahl Foundation annually supports up to 50 talented students in Germany by providing financial and non-financial assistance throughout academic training and professional development.     |
| <b>Scholarship Holder</b>              | <b>Louis Schuler Funds</b><br>Schuler group funds committed, technology-loving students with scholarships, awarding for remarkable achievements in the thesis and enabling students to pursue exciting projects at the universities. |