

TRABELSI AJILI Mehdi

Embedded Software and Hardware Engineer

Birthday and place: 06/24/1988 in Tunis

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Work Experience

- Since 05/2022**
 - **Part-time Software/Hardware Developer**
Sony Computer Science Laboratories, Inc., Tokyo, Japan
Research in embedded systems solutions
- Since 05/2021**
 - **Part-time Software/Hardware Developer**
BEST PATH RESEARCH, Tokyo, Japan
Development of AI and Robotics projects
- Since 10/2017**
 - **Research Assistant**
Tokyo Institute of Technology, Tokyo, Japan
Neural Network Implementation on FPGA and Embedded Systems
- 11/2020 — 09/2021**
 - **Part-time Freelance Coding Instructor**
Saturday Kids, Tokyo, Japan
- 04/2017 — 09/2017**
 - **Specialist / Electrical Engineer**
Ferchau Engineering / Continental GmbH, Schwalbach, Germany
Embedded and Server Development for Automotive Test Systems
- 09/2015 — 03/2017**
 - **Embedded Systems Engineer**
iSYS RTS GmbH, Munich, Germany
Embedded Test Automation, System Design, Infotainment
- 05/2015 — 08/2015**
 - **Internship, FPGA Developer**
Wavesens Electronics Gbr, Munich, Germany
Digital Design and implementation of an RF-Transmitter on FPGA
- 11/2014 — 01/2015**
 - **Working Student, Embedded Systems**
Motius GmbH, Munich, Germany
Implementation of a gesture control sensor in vehicles
- 08/2014 — 10/2014**
 - **Research Internship, Real-time Systems**
Institute of Robotics and Embedded Systems at TUM, Munich
Evaluation of Linux RTOS in a KVM Virtual Machine
- 10/2013 — 03/2014**
 - **Master Thesis, Robotics and Real-time Communication**
Fukushima Robotics Lab at Tokyo Institute of Technology, Japan
Real-Time Communication Improvement of an Earthquake Simulator
- 05/2013 — 07/2013**
 - **Research Internship, Hardware/Software Design**
Institute for Cognitive Systems at TUM, Munich, Germany
Design of an Interfacing Mechanism between ARM CPU and FPGA
- 07/2011 — 12/2011**
 - **Bachelor Thesis, Real-time Systems**
Institute for Real-Time Computer Systems at TUM, Munich, Germany
Improving the Xen Hypervisor to support automotive real-time tasks
- 03/2011 — 05/2011**
 - **Research Internship, C++ Software Development**
Institute for Electronic Design Automation at TUM, Munich, Germany
Developing a C++ Parser for EDA transistor simulation



Education

- 10/2017 — 03/2023**
 - International Graduate (Doctoral) Program
Tokyo Institute of Technology, Tokyo, Japan
- 04/2012 — 12/2014**
 - Master of Science Electrical Engineering
Technische Universität München (TUM), Munich, Germany
- 10/2013 — 03/2014**
 - TUMExchange International Exchange Program
Tokyo Institute of Technology, Tokyo, Japan
- 11/2012 — 11/2012**
 - Athens Exchange Program
Mines Paris Tech, Paris, France
- 10/2008 — 02/2012**
 - Bachelor of Science Electrical Engineering
Technische Universität München (TUM), Munich, Germany



Certifications

- DeepLearning.AI TensorFlow Developer, Specialization on Coursera (2021)
- TensorFlow: Data and Deployment, Specialization on Coursera (2021)
- Introduction to the Internet of Things, Courses on Coursera (2015—2016)



IT Skills

Operating Systems and Virtualization

Windows, Linux, FreeRTOS, Xenomai, PetaLinux, Yocto, Xen Hypervisor, KVM, Android, ROS

Programming and Development

C, C++, Python, Matlab, openCV, Windows Batch, Linux Bash, Docker, Anaconda, Jupyter, VSCode, git, HTML/CSS, PHP, Drupal

Circuit Design and Simulation

VHDL, Verilog, HLS, Xilinx Vivado, Xilinx Vitis, LTspice, Cadence Virtuoso

Deep Learning

Tensorflow, Keras, Tensorflow Lite, Caffe, Xilinx Vitis AI, TVM, HLS4ML

Office and Project Tools

Word, PowerPoint, Excel, Publisher, Visio, Latex, JIRA, Slack

Hardware and Communication

Xilinx Zynq SoC, Arduino, Raspberry Pi, Edge TPU, CAN, EtherCAT, SPI, I2C, AXI, TCP/IP, Sensors and Board Prototyping



Languages

English, Arabic, French, German, Japanese



Publications and Conferences

- "FPGA Acceleration of a Multimodal Neural Network", Poster presentation at DATE 2020
- "Multimodal Neural Network Acceleration on a Hybrid CPU-FPGA Architecture: A Case Study", IEEE Access, 2022



Scholarships

- Mitsubishi Corporation Scholarship (2018—2020)
- JASSO Honors Scholarship (2017—2018)
- Lothar-und-Sigrid-Rohde-Stiftung (2013)



Other Activities

- Member of Machine Learning Tokyo (MLT)
- Member of Tokyo Code Crunch (2019 —2020)
- Maritime RobotX Challenge Team (2013—2014)
- IT Manager for TAG e.V. (2011—2013)



Interests

Piano, Guitar, Cinephile, Cooking, Video Games, Traveling, Reading, Cultural exchange