# **MARIEM KHLIFI**

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# **RESEARCH INTEREST**

3D Computer Vision, Non-Rigid Registration, Shape Analysis, Riemannian Geometry, Morse Theory

## **EDUCATION**

## **Technical University of Munich**

MSc.Electrical and Computer Engineering "Deforming by experience: Realistic shape morphing of unseen objects with embedding-driven geometric optimization" Supervisors: Dr.Benjamin Busam and Fabian Manhardt

#### **IMT Atlantique**

MSc.Engineering (Double Degree with TUM)

### Nara Institute of Science and Technology

Visiting Research Student Robotics Perception

### **Czech Technical University in Prague**

Exchange Semester in Computer vision

# **RESEARCH EXPERIENCE**

### German Aerospace Center (DLR)

Working student
Detection for the robot David at the Robotics and Mechatronics Center.

## Nara Institute of Science and Technology

Research intern at Robotics Lab

• Completed pose estimation in Python using deep learning libraries and state-of-the-art algorithms.

### **IMT Atlantique**

Research intern at Electronics Lab

• Worked on finding a structure in the visual cortex of the brain that resembles the layers of neural networks like InceptionV3

# **TEACHING EXPERIENCE**

### **IMT Atlantique**

Computer Science Tutor

• Taught basics of algorithms, data structures, system related questions, computer science theory and programming languages

# **ReDI School of Digital Integration**

Python teacher

• Taught basics of programming for the Women's Digital Program.

## AWARDS

- Grace Hopper Celebration Women in Computing 2020 TUM IFF grant
- Winner of the HackaTUM Zeiss challenge
- Scholarship of Excellence to French Engineering Schools
- Award for my baccalaureate in Mathematics (among the first 0.5% nationally)
- Regional Award for being ranked first in the region

## **INDUSTRY EXPERIENCE**

Veios GmbH Part-time Software Developer Elasticbrains GmbH Part-time Software Developer

# **OPEN SOURCE CONTRIBUTIONS**

PyGraphistry

# HACKATHONS

ScienceHack

• Implemented a program in Python that makes a sound conversion based on the detected objects,

Munich, Germany Expected September 2022

**Brest, France** Expected September 2022

> Ikoma, Japan Aug 2019 to Oct 2019

Prague, Czech Republic

Feb 2018 to June 2018

Munich, Germany Jan 2020 to Apr 2020

**Ikoma, Japan** Sep 2019 to Oct 2019

Aug 2018 to Sep 2018

### **Brest**, France

#### Brest, France

Sep 2017 to Jan 2018

Munich, Germany Mar 2020 to Jul 2020

Munich, Germany Apr 2021 to Jun 2021 Munich, Germany Mar 2019 to Jul 2019 • Optimized the code by running multi-threading to make it 4 times faster(project link)

## SKILLS

- Programming Languages: Python, Java, C++, Matlab, C, SQL, UNIX Shell, Rust, Assembly,
- Frameworks and tools: Git, Flask, Pytorch, OpenCV, ROS, Gazebo, OpenAI, AR.js
- Software: Blender, MeshLab
- Languages: Arabic (Fluent), English (Fluent), French (Fluent) German (Advanced) Spanish (Intermediate) Japanese (Beginner)