# **RIM SLEIMI**

### **Earth Observation & Machine Learning Engineer**

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## **EXPERIENCE**

### Remote Sensing and GIS Junior Expert Sahara and Sahel Observatory (OSS)

September 2022 - Ongoing

Tunis, Tunisia

#### Used GEE for:

- Developing GUIs for vegetation gain and loss, generating labels for LULC, and reclassifying unsupervised LULC maps.
- SDG 15.3.1 reporting based on the UNCCD good practice guidance-V2 for all African countries;
- Phenology-based land cover classification;
- Forest fire assessment;

## Machine Learning | Remote Sensing Research Intern **International Water Management Institute (IWMI)**

- February 2022 December 2022 Remote
- Conducted literature review regarding drought and Flood monitoring.
- Developed a scalable method for drought monitoring using satellite remote sensing Data and PCA.
- Developed a pipeline to create an off-the-shelf model for timely flood mapping using open-source labeled Sentinel-1 data.
- Developed a web app that enables the end users to query Sentinel-1 data and generate flood masks.

## Remote Sensing | Machine Learning intern Sahara and Sahel Observatory (OSS)

March 2020 - November 2020 Tunis, Tunisia

**Graduation thesis:** Remote Sensing Approach for Water Balance Establishment in Irrigated Areas:

- Processed Sentinel 2 L2A and Landsat 8 remote sensing imagery.
- Conducted a comparative analysis of a multitude of classification models and Sentinel-2 band combinations/indices for crop type identification in Bizerte.
- Estimated evapotranspiration using the FAO-56 method and the SEBAL model.

### **GIS & Remote Sensing intern** Sahara and Sahel Observatory (OSS)

**July 2019 - August 2019** 

Tunis, Tunisia

Mapping and Inventory of protected areas:

- Developed maps of protected areas, as well as maps of protected areas and land use, in 28 African countries, according to the IUCN categories using ArcGIS.
- Writing reports.

## **ABOUT ME**

Enthusiastic and motivated, always seeking to learn and improve myself. I started as a Geosciences Engineer and found a passion for machine learning, earth observations, and spatial data analysis along the way.

## MOST PROUD OF

Ranked the first on a national level

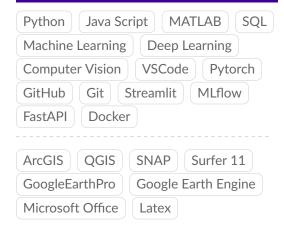
Ranked the first, on a national level, in the admission to engineering school's exams, and I was awarded by the minister of agriculture.



#### **Erasmus ICM Programme**

I was granted an Erasmus scholarship to study at Uppsala University-Sweden for one year

## **TECHNICAL SKILLS**



## **LANGUAGES**

**Arabic English** French Korean



## **EDUCATION**

## **Erasmus Student Exchange Programme Uppsala University (UU)**

**i** Jan 2021 − Jan 2022 **Sweden** 

#### Semester 1:

- Natural Computation Methods for Machine Learning (1DL073)
- Inversion Geophysics (1GE016)

# **RELEVANT PROJECTS**

#### **Buildings Detection**

**2022** 

This project studied building footprint detection in satellite imagery, a baseline need for many organizations that can enable many types of analyses. The goal is to develop a neural network-based solution to detect buildings in the images provided to accelerate mapping. The analysis is based on a curated subset of the SpaceNet7

Rim-chan/SpaceNet7-Buildings-Detection

Deep Leaning Python Pytorch

## Cloud Detection and Segmentation using Deep Learning **Uppsala University**

**2**021

- Conducted a brief literature review of the current advances in computer vision regarding image segmentation;
- Investigated the reliability of transfer Learning for the task of semantic segmentation of clouds in satellite imagery;
- Implemented and compared several deep learning models (Unet, Unet++, Efficient-Net, Unet with a ResNet backbone, VGG16, and ResNet) for cloud segmentation in satellite imagery using Pytorch.

Python

Rim-chan/Cloud-Segmentation-Using-DL

Deep Leaning

Sentinel-2

Pytorch

## Do women talk too much in films **Uppsala University**

**=** 2021

Predicting the lead actor in a Hollywood film, which can be male or

- Conducted Exploratory Data Analysis and Feature Engineering.
- Trained, evaluated, and tested a plethora of machine Learning classifiers;
- Hyperparameter tuning.

Rim-chan/Do-wo-men-talk-too-much-in-films-

Machine Learning | Python

## Geothermal Mapping in the Eastern and Western branches of the East African Rift Valley

#### **Uppsala University**

**2021** 

- Created cartographic and data visualization products: Mineral, Vegetation, Surface Temperature, and Heat flux mapping;
- Compared and cross-validated products from Landsat 8 and ASTER thermal data;
- Identified potential geothermal reservoirs.

ArcGIS Sentinel-2 Landsat-8 **ASTER**  Seismology (1GE058)

Semester 2:

- Statistical Machine Learning (1RT700)
- Algorithms and Data Structures I (1DL210)
- DataBase Design I (1DL301)
- Presentation and Publication (1GV006)
- Applied Geoinformatics for Earth Sciences (1GE039)
- Times Series Analysis of Geophysical Data (1GE049)

Joint Master Degree in Computer sciences: Computer Vision and Machine Learning Specialization

**National Engineering School of Tunis (ENIT)** & Université de Paris Descartes (UPD)

**■** Sep 2019 - Dec 2020 Tunis

#### Korean Language

Higher School of commerce-Manouba University (ESSECT)

**i** Sep 2018 – Jul 2019 **●** Manouba

### Geosciences Engineering studies Faculty of sciences Tunis el Manar (FST)

**■** Sep 2017 - Dec 2020 Tunis

Preparatory studies in biology and geology

**Higher Institute of Preparatory Studies in** Biology-Geology (ISEP BG Soukra) & Higher Institute of Applied Sciences and Technology of Gabés (ISSAT Gabes)

Sep 2015 - Jul 2017 ▼ Tunis