

# EZEQUIEL MUSSAMBE 5174553585 | ezequielmussambe@gmail.com | East Lansing, MI

# **EDUCATION**

Michigan State University, Bachelor of Science, Geographic Information Science and Cartography

December 2019

Minor in Mathematics and Economics

#### **WORK EXPERIENCE**

#### **GIS Analyst and GIS Developer**

2020-2023

Hydrosimulatics, Inc

- Process water wells data and classify lithologic materials (Boreholes lithology) using QGIS and Python
- Calculate borehole thickness of lithologic materials using Python scripts\QGIS
- Update vector features of water wells using QGIS as main GIS software
- Check python dependencies for Spatial Analysis and stats
- Process HRU data using SWAT (Soil Water Assessment tool) \QGIS and DEM tiles
- Build a web mapping services web application to provide environmental georeferenced data around the world
- Manipulate and extract web mapping service data (web map services, web feature services and web coverage services)

#### **Undergraduate GIS Research Assistant**

Summer 2019

Landscape Ecology & Ecosystem Science Lab

- Processed and orthorectified Ortho mosaic sub-watershed historical imagery to use them for land use and land cover classification. The primary software I used as Undergraduate GIS Research Assistant for orthorectification of historical aerial photos of sub-watersheds are Pix4D and ArcGIS software
- Classified Land cover/use Kalamazoo Watershed by using eCognition as primary GIS software
- Georeferenced and Converted more than 400 historical images into grayscale by using python script and Irfan view and Geo Setter to use to create raster mosaic
- Assisted in the maintenance of more than seven radiation towers in crops field to measure albedo and monitor crop health
- Used a GPS device in the field to walk across the vegetated field and to identify more than 30 plots for data collection
- Collected data on the height of vegetation, leaf area index, soil moisture, and nitrogen of biofuel crops to understand the active photosynthetic area of plants, and measure for soil moisture

# **Enrollment Assistant/Orientation Leader**

Fall 2017

MSU Academic Orientation Program

- Helped over 100 incoming students enroll in classes
- Answered questions related to class options and class availability, and helped students create academic schedules
- Completed data entry for each student academic profile
- Provided a welcoming environment for incoming students

Residential Assistant 2018-2019

MSU Residential and Housing Services

- Helped to lead general maintenance and general upkeep of the building
- Worked collaboratively with the team to ensure we meet the health and safety standards of the building
- Oversaw grounds keeping teamwork duties to ensure work gets done timely and in an effective manner

**PROJECTS** 



- Global web mapping service web application data visualization and data extraction 2021-Current
- Orthorectification of historical aerial photos for four sub-watersheds within the Kalamazoo Watershed.
- Land Cover/Use Classification of Kalamazoo Watershed based on Object-Based Classification.
- Sonangol Full Ride Scholarship, Fall 2014
- MSU Dean's List
  Spring 2016 to Fall 2019

#### **SKILLS AND ABILITIES**

- GIS and Remote Sensing Software (ArcMap, QGIS, eCognition, Pix4D)
- SQL & NoSQL Database Management (PostGIS, MySQL, Firebase)
- Web and Desktop\Mobile Application development (Python, CSS, HTML, JS, TS, Angular Framework)
- R & RStudio Language
- Mathematics and Geostatistics\Statistic
- First language Portuguese
- Second language English

## **AWARD & SCHOLARSHIP**

- Outstanding Performance Award English Program at MSU
- Sonangol Full Ride Scholarship, Fall 2014
- MSU Dean's List
  Spring 2016 to Fall 2019

### **ORGANIZATIONS & EXTRACURRICULARS**

•	The National Society College Scholars, Member	2017
•	SLA, Member	2017
•	Ango Spartan Student Association, Member	2018