




# JESSICA SOTO BALVANERA

GIS ANALYST

## CONTACT

 Enschede, Overijssel, Netherlands

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## LANGUAGES

- Spanish - Native
- English - Proficient (IELTS score: 8.0)

## SKILLS

- Programming Skills: R, Python, MATLAB
- Experienced user of GIS mapping and 3D modeling software: ArcGIS Pro, QGIS, Google Earth Engine (GEE), SQL, ENVI, ContextCapture, Pix4D
- AutoCAD
- Proficient in Microsoft Office (Word, Excel, PowerPoint, Outlook, Teams)

## ACADEMIC EXPERIENCE

### Master's Thesis Research

Enschede, Netherlands

**University of Twente - ITC Faculty | 2022 - 2023**

**Topic: Comparing the accuracy of remote sensing methods for estimating foliar pigments across tree species and years using DESIS imagery**

- Employed statistical models (VIs & PLSR) to uncover patterns and relationships within forest field data and remote sensing datasets
- Demonstrated strong analytical skills in addressing complex questions related to forest ecosystem dynamics and monitoring

### Graduate Intern

Oberpfaffenhofen, Germany

**German Aerospace Center (DLR) | 2023**

**Project: Analysis of bark beetle infestation in the Bavarian Forest using vegetation indices**

- Pre-processed satellite imagery (Sentinel-2, EnMAP, and DESIS) using GEE, python, R and ATCOR
- Analyzed satellite data to identify patterns of bark beetle infestation and assess environmental impacts
- Implemented data visualization techniques (e.g., map layouts) to effectively communicate findings

## RELEVANT PROJECT

### Species Distribution Modeling

Enschede, Netherlands

- Developed a predictive model for Veronica Thymifolia in West Crete
- Utilized Logistic Regression (GLM) and Boosted Regression Trees (BRT) for predictive analysis
- Made predictions for CMIP6 climate projections and discussed findings

## PROFESSIONAL EXPERIENCE

### Lecturer

Los Mochis, Sinaloa, Mexico

**Tecmilenio University and Durango Autonomous University | 2020 - 2021**

Instructed English as a second language, Ecology, and Geography courses, effectively communicating complex concepts to diverse student groups in both English and Spanish

### GIS Technician

Zapopan, Jalisco, Mexico

**Cartodata | 2017 - 2019**

- Conducted automatization of geospatial data processing (with LiDAR, vector and raster data)
- Worked with geospatial databases (SQL) and eCarto geographical web platform
- Generated 3D models using ContextCapture and Pix4D from UAV and aircraft imagery
- Managed a team of 5 colleagues as a production leader at Cartodata, optimizing workflow and ensuring quality standards

## EDUCATION

### MSc in Geo-information Science and Earth Observation

Enschede, Netherlands

**University of Twente - ITC Faculty | 2021 - 2023**

**Specialization in Natural Resources Management**

Awarded the ITC Excellence Scholarship

### BSc in Environmental Engineering

Tlaquepaque, Jalisco, Mexico

**Western Institute of Technology and Higher Education (ITESO) | 2012 - 2017**