

# Alex Maverick Pabillaran

Agricultural & Biosystems Engineer | GIS & Remote Sensing Specialist

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## PROFESSIONAL SUMMARY

Agricultural and Biosystems Engineer specializing in GIS, Remote Sensing, and Earth Observation for climate-smart agriculture and environmental decision support. Experienced in spatial analysis, watershed and hydrological mapping, hazard assessment, UAV operations, and geospatial training using QGIS and Google Earth Engine. Seeking GIS, Remote Sensing, and Geospatial Analytics roles in local and international contexts.

## WORK EXPERIENCE

### MSTCONNECT PH

Aug 2025 – Present

Online Lecturer

Philippines

- Designed and delivered 4 QGIS workshops to 739+ participants with trainer ratings of 8.87–9.18/10, covering Crime Statistics & Mapping, Introduction to GIS, Land & Watershed Management, and Land Suitability Analysis.

### Provincial Science and Technology Office – Bukidnon (Project SARAI Northern Mindanao)

Jul 2025 – Apr 2026

GIS and Remote Sensing Staff

Malaybalay City, Philippines

- Produced NDVI, Rainfall, and AWS Suitability Maps for Northern Mindanao using QGIS, GEE, and Google Slides.
- Conducted 4 CL-SEAMS trainings (60 participants each); planned 5 SARAI CeNTRO meetings, 4 LGU coordination meetings, and 1 partner SUC engagement.

### Independent GIS Consultant

Mar 2026 – Apr 2026

GIS Consultant

Philippines

- Produced watershed catchment maps, proposed service area map with waterline layout, 100-Year Flood Hazard Maps, Landslide Hazard Maps, and Storm Surge Advisory 1–4 Maps for all 22 barangays in Balabagan, Lanao del Sur using QGIS and ESA Copernicus DEM via Google Earth Engine.
- Conducted field surveys (rodman), aerial photography (DJI Mavic 3 Air), discharge measurements (bucket and float methods), and water sample collection for a Level III Water System development project.
- Provided online consulting on HEC-RAS raster cleanup, QGIS DEM-to-slope conversion, cartographic symbology, and print layout design.

### Modii Inc.

Jun 2025 – Jul 2025

Freelancer – GIS Data Validation and Entry

Remote

- Validated traffic sign data across 5,000+ street blocks using QGIS, Google Maps, and Google Sheets, contributing to a high-accuracy geospatial database for urban mobility.

### Agricultural and Biosystems Engineering Division

Mar 2025 – Jul 2025

Agricultural and Biosystems Engineer I

Malaybalay City, Philippines

- Produced Detailed Engineering Design (DED), Program of Work (POW), and Unit Price Analysis for 2 Multi-Commodity Sheds and a Multi-Purpose Drying Pavement (QGIS, AutoCAD, SketchUp, Enscape, Excel).
- Automated the Water Pump Database using Google Sheets; led irrigation canal and Farm Machinery Equipment inventories.

## EDUCATION

### Central Mindanao University

2020 – 2024

B.S. in Agricultural and Biosystems Engineering

Maramag, Bukidnon, Philippines

- Graduated cum laude.
- Thesis: "GIS-Based State of On-Farm Corn (*Zea mays*) Mechanization in Southern Bukidnon."
- Designed 4 farm structure DEDs: Greenhouse, Cold Storage, Machinery Shed, and Swine House.

## INTERSHIPS

### NMACLRC & Urban Greens Hydroponic Systems, Inc.

Feb 2024 – May 2024

Student Intern

Malaybalay City & Makati City, Philippines

- NMACLRC: Produced a 10-day rainfall map (QGIS); feasibility study for a Goat/Sheep House (AutoCAD, SketchUp); performance testing of 15 water pumps and 4 tractors using PAES; hands-on farming operations.
- Urban Greens: ETL operations for CAPEX & OPEX data (Google Sheets); monitored IoT/automation systems (Google Home); daily farm health monitoring.

## LICENSES & CERTIFICATIONS

Licensed Agricultural and Biosystems Engineer | Google Data Analytics Professional Certificate | Python Programming Professional Certificate | GEE for Water Resources Management | Hazard & Risk Assessment Fundamentals | Introduction to Analytics Engineering | Eagle Scout

## SKILLS & SOFTWARE

**GIS & Remote Sensing:** QGIS, Google Earth Engine, Raster & Vector Geoprocessing, LULC Mapping, Watershed Delineation, Hydrological Analysis, Suitability Mapping, Sentinel-2, Landsat – 8, & CHIRPS Processing, Google Earth Pro

**Engineering Design:** AutoCAD, SketchUp, Enscape

**Data & Productivity:** MS Office, Google Sheets, Canva, Notion

**Field:** Land Surveying, Discharge Measurement, UAV Mission Planning & Aerial Photography (DJI Mavic 3 Air)