



CELESTIAL A. MANIGO

Geodetic Engineer | SRA

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Key Qualifications

A licensed Geodetic Engineer working in the field of Geographic Information Systems and Land Surveying. I have over 6 years of experience in the said fields. I was involved in 3 national funded projects including, Phil-LiDAR project, AMIA and SSIP funded by DOST and DA-BAR respectively. I also worked in the private sector as a Geodetic Engineer before I was employed in Visayas State University. While doing GIS-based projects, I also assisted in the planning of Irrigation System in Marabut, Samar for the TUKOD: Haiyan Reconstruction Project, and Flood Analysis of Antiao River Basin.

Education

- Graduate of BS in Geodetic Engineering, Visayas State University, Baybay City, Leyte, 2013
- Master of Science in Land Administration and Management (on-going)

Registrations

- Geodetic Engineer (since 2013, PRC No. 0009079)

Employment Record

From : March 2015 **To** : June 2021
Employer : Visayas State University
Position Held : Science Research Specialist/GIS Specialist

From : 2013 **To** : 2015
Employer : Certeza Infosys Corporation
Position Held : Geodetic Engineer

Work Undertaken that Best Illustrates Capability to Handle Tasks

A. Project Name: Geoinformatics and Hydrology Study of Sab-A Peatland

Funding Agency: International Institute of Rural Reconstruction (IIRR)

Project Location: Sab-A Peatland (Sta Fe, Alang-Alang and San Miguel Leyte)

Project/Assignment Period: January 2021 - Present

Position Held: Geodetic Engineer/ GIS Specialist

Short Description of Project: The objective of the project is to generate an aerial map of the Sab-A Peatland and its Hydrologic Analysis

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Activities Performed:

Field survey activity includes the following:

- Drone Mapping for the Aerial photo and Digital Elevation Model
- Gathering of Rainfall and Waterlevel using an automatic lagging Raingauge and Depth gauge, respectively.

Processing and Analysis:

- Processing of orthophotos.
- Hydrological Model Calibration HEC-HMS
- Flood Model Simulation using HEC-RAS

B. Project Name: Flood Hazard Analysis of Antiao River Basin in Catbalogan City, Samar

Funding Agency: Samar Provincial Government

Project Location: Catbalogan City, Samar

Project/Assignment Period: June 2020 - Present

Position Held: Geodetic Engineer/ GIS Specialist

Short Description of Project: The objective of the project is to generate a flood hazard analysis and flood inundation of the city of Catbalogan.

Activities Performed:

Field survey activity includes the following:

- Bathymetric Survey of Antiao River
- Establishment of Ground Control Points using GNSS RTK
- Drone Mapping for the Aerial photo and Digital Elevation Model
- River Cross-section Survey at Antiao Bridge
- Gathering of Rainfall and Waterlevel using an automatic lagging Raingauge and Depth gauge, respectively.

Processing and Analysis:

- Bathymetric data and Topographic data integration using ArcGIS
- Hydrological Model Calibration HEC-HMS
- Flood Model Simulation using HEC-RAS

C. Project Name: GIS-based Suitability mapping of Small-Scale Irrigation Projects in Region 8

Funding Agency: Department of Agriculture Bureau of Agricultural Research (DA-BAR)

Project Location: Region 8

Project/Assignment Period: January 2018 – Present

Position Held: Science Research Analyst

Short Description of Project: The objective of the project is to generate Suitability maps of water sources and irrigable areas for Small-scale Irrigation Projects such as: Diversion Dam (DD), Small Water Impounding Project (SWIP), Small Farm Reservoir (SFR), Shallow-tube well (STW) and Pumping Irrigation from Open Sources (PISOS).

Activities Performed: Field survey activity in all accessible municipalities of Region 8 was conducted, like validation and inventory of Irrigation sites and water pumps distributed by

the DA for the purpose of irrigation. GIS data processing and analysis of suitability mapping for each SSIP's. Some of the data used are Digital Elevation Model, Landcover map, Soil Map, Geologic Map, Rainfall data. Aside from the Suitability map generated, methodology of data processing and analysis was developed.

D. Project Name: TUKOD: Haiyan Reconstruction Project

Client: CECI-CONCERN, Inc.

Project Location: Brgy. Tagalag, Marabut, Samar

Project/Assignment Period: June - November 2017

Short Description of Project: The objective of the TUKOD project was to provide Irrigation System of Brgy Tagalag, Marabut, Samar.

Position Held: Surveyor and GIS Specialist

Activities Performed:

- Topographic survey of the potential site of irrigation source and service area
- Route survey and profiling of the proposed Irrigational canal

E. Project Name: Phil-LiDAR Project – Flood Modelling Component for the 28 major river basins of Region 8.

Funding Agency: DOST

Project Location: Region 8

Project/Assignment Period: March 2015- May 2017

Short Description of Project: Generate Flood Models and Maps of the 28 major river basins of Region 8.

Position Held: Science Research Specialist II

Activities Performed: Tasks as a Science Research Specialist includes

Field Activities:

- Control Establishment
- Bathymetric Survey
- River Cross-sections
- Gathering of Hydrologic data (Flow, Waterlevel and Rainfall data)

Data processing and analysis:

- Watershed Delineation
- Hydrologic Model Calibration
- Hydraulic Model Simulation/ Flood Modelling in 1D and 2D
- Flood map Layout

F. Project Name: Parcellary Survey of Affected areas for Hydro Electric Power Plant in Ifugao

Client: S/N Aboitiz Power Generation Inc. (SNAPG Inc)

Project Location: Ifugao Province

Project/Assignment Period: April 2014 - November 2014

Short Description of Project: The objective of the project is to identify and map out on ground the affected lands and land claimants that will be affected in the construction of the Hydro-Electric power plant in Ifugao Province, particularly in the municipalities of Lamut, Lagawe, Mayoyao and Aguinaldo.

Position Held: Geodetic Engineer

Activities performed: Conduct research and compile land titles and tax declarations present on the potential areas. Conduct ground survey: 1. Control Establishment, 2. Parcellary survey of affected lots, around 5000 hectares in total. Completion of Parcellary map.

Skills

- Geographical Information System (GIS)
- Land Surveying
- Total Station
- GPS RTK
- ArcGIS, QGIS, Autocad

Awards and Citations:

- 9th Placer of the 2013 Professional Licensure Examination for Geodetic Engineering

Trainings/Seminars/Workshops/Conferences

- 5th Philippine ESRI Education GIS Conference (EDSA Shangri-la Hotel, May 2019)
- ArcSWAT Training (November 2019)

Membership in Professional Society

- Member, Geodetic Engineers of the Philippines Inc.

References

- Dr. Pastor P. Garcia, PhD : Unit Head of VSU-GIS Unit
pastor.garcia@vsu.edu.ph
- Engr. Edgardo Ochavillo : Instructor, Dept. of Mechanical Engineering
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- Engr. Omar P. Jayag : Hydrologist, President and COO Terra-Hydrology Corp
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Certification:

I, the undersigned, certify that I am a Filipino and that these data correctly describe me, my qualifications, and my experience. I am authorized by the Republic of the Philippines through the Professional Regulation Commission to practice my chosen profession.



CELESTIAL A. MANIGO

Date: July 9, 2021