

Arun Biju

Lawrencetown, Nova Scotia

 arunbijupersonal@gmail.com |  +1 (902) 824 5925

 arunbiju.com

Professional Summary

Detail-oriented GIS and Remote Sensing specialist with a background in civil engineering, spatial data analysis, automation, and full-stack development. Experienced with geospatial tools such as ArcGIS Suite, PostGIS, and open-source platforms like GeoServer and MapServer. Skilled in Python scripting, database integration, and BIM software including AutoCAD and MiTek Suite. Adept at designing cloud-centric workflows, automating data pipelines, and building spatial web applications. Passionate about solving real-world problems through geospatial intelligence and sustainable development solutions.

Education

Graduate Certificate in Geographic Information Systems

Centre of Geographic Sciences (COGS), NSCC — 2024 – 2025 (*Expected*)

Graduate Certificate in Remote Sensing

Centre of Geographic Sciences (COGS), NSCC — 2023 – 2024

Bachelor of Technology in Civil Engineering

Kerala Technological University — 2016 – 2020

Technical Skills

- **GIS & Remote Sensing:** ArcGIS Pro, ArcGIS Online, ArcGIS Enterprise, QGIS, GeoServer, MapServer, Survey123, ArcGIS Field Maps
 - **Civil & Design Tools:** AutoCAD, MiTek Suite, Civil 3D, STAAD.Pro, BIM workflows, Microsoft Project
 - **Programming & Automation:** Python (ArcPy, geospatial libraries), SQL, R, Arcade, Django, basic HTML/CSS/JavaScript
 - **Spatial Analysis & Visualization:** PostGIS, Google Earth Engine, Oracle Autonomous Database (JSON + Spatial), Power BI, Dashboards
 - **Cloud & Databases:** PostgreSQL/PostGIS, SQL Server, Oracle Cloud Infrastructure, Linux & Windows systems
 - **Documentation & Writing:** Technical blogs, user manuals, project documentation
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Projects

AI-Powered Spatial Query Assistant (Capstone Project – GIS)

Developing a Retrieval-Augmented Generation (RAG) pipeline using Google Agent Development Kit and NVIDIA embedding models to interpret natural language queries into spatial SQL. Connected to a PostGIS geodatabase and GeoServer to dynamically serve spatial data via WMS/WFS.

Earth Engine Web App (Capstone Project – Remote Sensing)

Built an interactive web tool using Solara and Google Earth Engine to visualize MOD17A3HGF vegetation productivity data for Nova Scotia, enabling spatiotemporal analysis and mapping.

Land Cover Classification and Vegetation Monitoring

Applied remote sensing techniques using Sentinel-2 and Landsat imagery to perform supervised classification and NDVI-based vegetation health monitoring.

Truss Designer

Frank Illsley Woodworking – Jan 2024 to Present

- Designed and modeled wooden truss components for a variety of residential and commercial structural projects using MiTek software.
- Interpreted architectural and structural plans to develop accurate and code-compliant truss systems.
- Collaborated with engineers, architects, and production teams to ensure design feasibility, structural integrity, and alignment with construction timelines.

Geomatics Engineer

Dream Nest Homes – Aug 2022 to Sept 2023

- Collected, processed, and analyzed spatial data to support civil engineering and land development projects.
- Generated detailed topographic and alignment reports including distance, curvature, and slope analysis for infrastructure planning.
- Utilized GIS tools to produce maps, site layouts, and planning documents for project approvals and decision-making.

Jr. Python Intern (Part-time)

Inmakes – Oct 2022 to Jan 2023

- Developed backend automation scripts in Python to streamline repetitive tasks and data processing workflows.
 - Contributed to API integration and enhancement of internal web platforms, improving performance and usability.
 - Gained hands-on experience in backend development, data analytics, and service-oriented architecture in a team-based environment.
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Certifications

- **Google IT Support Specialization**
 - **Python Django Practical Guide**
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References

Available upon request.

