Simon A Bardsley

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Professional Summary

A highly skilled and dedicated geospatial professional with 26 years of experience in geospatial analysis, environmental science, and GIS technologies. Proficient in leveraging GIS and Remote Sensing for various applications, committed to evidence-based decision-making, and passionate about addressing environmental and climate challenges.

Professional Experience

Senior Geospatial Scientist/CEO — NZSpatial/TerraAnalytica, Auckland
March 2023 – Current

- Performed business development activities including website development, financing, procurement, and budgeting.

- Initiated product development ideation, marketing, networking, and vendor relationships.

- Collaborated with a UK-based startup in evaluating their high-resolution satellite-based thermal imagery for urban heat mapping.

Geospatial Specialist — Xerra - Earth Observation Institute, Alexandra
July 2019 – November 2020

- Conducted detailed geospatial analysis for mapping construction activities in Auckland.

- Led supply and tasking of customer orders for satellite imagery, utilizing vendor web-based tools.

- Collaborated with cross-functional teams to provide additional geospatial support.

Geospatial Specialist — Auckland Council (Geospatial, Projects and Programs)
October 2017 – June 2019

- Developed and executed a project to create an MVP satellite imagery mosaic of the Auckland region.

- Utilized ArcGIS Online to create public consultation maps for policy recommendations.

- Engaged with stakeholders through workshops and presentations.

Geospatial Analyst — Auckland Council (Geospatial, Service Delivery)
October 2014 – October 2017

- Conducted detailed geospatial analysis for internal council projects.

- Led data provision service, developed a supply process and FME workbench to streamline data requests.

- Collaborated with subject matter experts on the update and migration of digital data and maps.

GIS Technician — NIWA, (Ocean Geology Team), Greta Point, Wellington
October 2007 – October 2011

- Captured and developed a regional model of sedimentary observations for the Marine Environment Classification dataset.

- Utilized GIS and remote sensing tools to analyze substrates for the Ocean 2020 project.

- Participated in research voyages, providing multi-beam processing support and sampling for various oceanographic studies.

Education

Master of Science in Geography, GIS, and Remote Sensing
University of Canterbury, Christchurch
July 2001 – March 2004

- Thesis: "A Multi-Sensor Investigation of Land Cover Composition and LST Variance in a Heterogeneous Environment."

- Relevant coursework: Atmospheric studies, Geospatial Sciences, Environmental Remote Sensing, Snow and Ice Processes.

Bachelor of Science
University Canterbury, Christchurch
March 1997 – June 2001

- Major in Physical Geography, GIS, and Remote Sensing; Minor in Geology.

- Relevant coursework: GIS, Remote Sensing, Atmospheric Environment, Snow and Ice Processes, Field Methods, Mining Geology, and Geological Field Mapping.

Certifications

- Machine Learning Specialization, IBM (Coursera), Current

- Philosophy of Science, University of Pennsylvania (Coursera), 2024

- Business Intelligence Specialization, Google (Coursera), 2024

- Project Management Professional Certificate, Google (Coursera), 2023

- Data Analytics Professional Certificate, Google (Coursera), 2023

- FME Certified Professional, (Safe Software), 2022

Skills

- **GIS & Remote Sensing:** Proficient in ArcGIS, QGIS, remote sensing applications, and spatial data analysis.

- **Data Analysis & Programming:** Skilled in Python, R, and statistical analysis for environmental data interpretation.

- **Project Management:** Experienced with agile methodologies, ensuring timely delivery and stakeholder engagement.

- **Communication:** Excellent communication skills, with experience presenting to diverse audiences.

Personal Projects/Contributions

- **Remote Sensing of the Manukau Harbour:** Volunteer project mapping optical water depth, salinity, and water temperature using space-based imagery.

- **Mapping Mount Ngauruhoe:** Project to explore SAR imagery for mapping lava/debris flows using Sentinel 1 and 2 imagery, iPhone LiDAR, and drone-based photogrammetry.

- **Cornwall Park Map:** Created a DEM using an iPhone and Fitbit, visualizing over 300k GPS points captured during lockdown walks, displayed in the park's visitor center.

- **Aerospace Auckland:** Involved in networking to get SMEs and mentors involved with members, focusing on expertise in Earth Observation.

Professional Affiliations

- Member, New Zealand Cartographic Society, Since 2010

- Member, IEEE, IEEE Geospatial and Remote Sensing Society (GRSS), 2023

Interests

- Outdoor activities to connect with the environment and gain insights into the challenges it faces.

- Continuous learning, particularly in areas of emerging geospatial technologies, to stay at the forefront of the field.

Figure 1: Enter Caption