

Julie K. Jakoboski

Data Scientist and Project Manager

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SUMMARY

Data scientist/engineer and project manager with 12+ years' experience in new applications in data science, data management, stakeholder engagement, and problem resolution. Led the technical development and deployment of a multimillion-dollar crowd-sourced ocean observing network, including an operational, near real-time data pathway, and delivered impactful outcomes in nation-wide data provision. Combines collaboration with multidisciplinary teams, internal and external partners, and wide range of stakeholders with technical expertise to deliver measurable data science outcomes aligned with project requirements and business strategy. Driven by learning new technologies applied toward meaningful innovation.

EXPERIENCE

Aotearoa Moana Observing System, Nelson, NZ

Trustee and Technical Expert

2024-present

- Co-coordinating the transition of a novel ocean observing system from management under New Zealand's MetService to a charitable trust, including data management and communications

Research and Innovation Hub, Meteorological Service of New Zealand Raglan, NZ

Project Manager and Technical Program Lead

2023-2024

- Delivered the final phase of the nation-wide Moana Project, ensuring budget compliance and timely, accurate completion by monitoring finances, risks, and timelines.

Data Scientist and Research Team Lead

2019-2023

- Using an Agile approach, led the design and deployment of an end-to-end data pathway, delivering industry-leading, quality-controlled data and data visualizations to diverse users nation-wide. Automated data pathway is operational in near real-time with no maintenance needed for 3+ years.
- Developed and implemented metrics to understand sensor network performance, identify deployment priorities, and worked closely across business teams to inform product development.
- Applied machine learning and statistical approaches to the near real-time quality control of large structured (70TB) and unstructured (millions of datapoints per month) earth science datasets to draw essential data insights highlighting impacts to local ecosystems and industries.
- Communicated project outcomes to scientific experts, educational institutions, fishing industry professionals, and government agencies through reports, media releases, scientific papers, workshops, conferences, newsletters, and dashboards.
- Delivered project data insights and recommended technical approaches to internal project team members, executive management, and project board members to inform company business decisions and highlight opportunities that aligned with business strategy.

Jet Propulsion Laboratory, Pasadena, CA, USA

Instrument Mechanical Engineer I & II, Mechanical Systems Engineer

- Designed, developed, and tested advanced instrumentation for space exploration adhering to NASA standards and exceeding performance requirements while staying within budget and on schedule. Collaborated with multidisciplinary teams to ensure mechanical system reliability and performance in extreme environments.

EDUCATION

Massachusetts Institute of Technology, Cambridge, MA, USA

PH.D., MIT & WHOI Joint Program in Physical Oceanography 2019

Bucknell University, Lewisburg, PA, USA

B.S. Mechanical Engineering and B.A. in Physics, *magna cum laude* 2007

SKILLS

Python, Data Visualization, Docker, PostgreSQL, Git, Microsoft Azure (Data Lake Storage, Azure ML), Kubernetes, Power BI, Jira, Sci-kit learn, Machine Learning, Stakeholder Engagement, Cross-functional Team Leadership, Cross-cultural Communication, Spanish (advanced), reo Māori (intermediate)

SELECT CERTIFICATIONS

Certified Scrum Master, October 2024, Scrum Alliance

Introduction to Team Leadership in Business, December 2023, Te Wānanga o Aotearoa

MOOC Machine Learning in Weather and Climate, April 2023, ECMWF and iFAB

SELECT HONORS AND AWARDS

NASA Earth and Space Science Graduate Fellowship, 2019

MIT EarthHack, 1ST Place, Machine Learning and Visualization Project, 2019

Top Graduate Student WxChallenge Individual Station Forecaster, 2018

NASA Group Achievement Award, 2012 & 2015

NASA Individual Certificate of Appreciation, 2014

HOBBIES & INTERESTS

Community outreach, mentoring STEM students, Letters to a Pre-scientist, coaching Girls on the Run, flutist, surfing, trail/mountain running, open water swimming