



Mathews

WATER MODELLER

WATER MODELLING / WATER ASSESSMENT

What do you do in your position

- conduct borehole redundancy analysis to optimise groundwater monitoring networks.
- develop AET (Actual Evapotranspiration) and rainfall datacubes for climate and water resource modelling
- implement sinkhole detection using AI by developing machine learning models for predictive analysis
- develop AI models for tree classification to monitor groundwater-dependent ecosystems
- optimise monitoring routes using AI to improve efficiency in ground water monitoring
- analyse future climate data projections to assess long-term impacts on water resources
- work with GIS and remote sensing technologies to analyse and visualise water resources
- integrate climate, hydrology, and geospatial data to support water resource management
- support fieldwork activities, including data collection of monitoring boreholes and water quality sampling.

What qualifications or skills do you need for your position

- Master in data science / relevant qualification in hydrology
- proficiency in Python coding
- understanding of QGIS and GIS tools
- knowledge of water resources, groundwater and surface water
- understanding of hydrology and geospatial analysis

- experience with remote sensing and environmental modelling
- skills in statistical analysis and data visualisation
- familiarity with spatial databases (PostGIS, SQL)
- ability to manage projects and collaborate with teams
- strong problem-solving and adaptability skills.

Highlight or achievement

- attended the Advanced Earth Observation Conference, staying updated on the latest geospatial innovations and engaging with peers and experts in the field
- conducted borehole redundancy analysis to optimise groundwater monitoring networks in Ooloo, Ti Tree, and Alice Springs
- developed AET and rainfall datacubes to enhance climate and water resource modeling, enabling more efficient data analysis.

What do you love about working in the Territory

The Northern Territory is more than just a workplace—it's an adventure. I love the wide-open landscapes, the incredible natural beauty, and the opportunity to work on meaningful projects that protect our precious water resources. The Territory's strong sense of community and laid-back lifestyle make it a truly special place to live and work.

Words of wisdom

Adapt, innovate, and keep learning—because progress comes from persistence and curiosity.