Geotrail Development and the Potential For AI Driven Interpretation

by

Angus M Robinson (Coordinator) and Mark Williams,
Geotourism Australia

BACKGROUND

An examination by Jessica Willemse (a Utas geotourism student) of the Port Macquarie Coastal Geotrail in New South Wales—one of Australia's earliest purpose-built geotrails demonstrated the value of linking geodiversity with human experience through experiential learning.

OPPORTUNITY

Nevertheless, hands-on engagement and reflection fosters more effective connections between interpretive content and real-world understanding, particularly for school groups where on-site learning reinforces classroom discussions.

However, for casual visitors, reliance on static signage limits engagement, especially in the absence of staffed or interactive interpretation centres.

POTENTIAL AI APPLICATIONS

Digital platforms provide a pathway to address these limitations. The Australian Geotourism Discovery Portal, currently under development, will enable visitors to access layered interpretive content via personal devices.

Integrating AI with digital technologies could further enhance engagement through:

- Personalised recommendations based on user behaviour, preferences, and demographics;
* Natural-language processing to enable intuitive, question-based searching;
* Image recognition tools allowing users to upload photographs for site or feature identification; and
* Accessibility enhancements through real-time translations, audio descriptions, and customised content for users with diverse needs.

Dr Mark Williams
Chair of Working Group 1, Geotourism Australia, Australian Geoscience Council Inc
E: mark.williams@utas.edu.au

Development of new digital technologies to highlight and interpret natural and cultural heritage, highlighting geology and landscape, for a wide spectrum of visitors is being undertaken by Working Group 1 as one of seven key goals of the National Geotourism Strategy, launched in April 2021.

Geotourism Australia