
FIJI

Leading the Pacific Islands: building a national science and research ecosystem for the age of artificial intelligence

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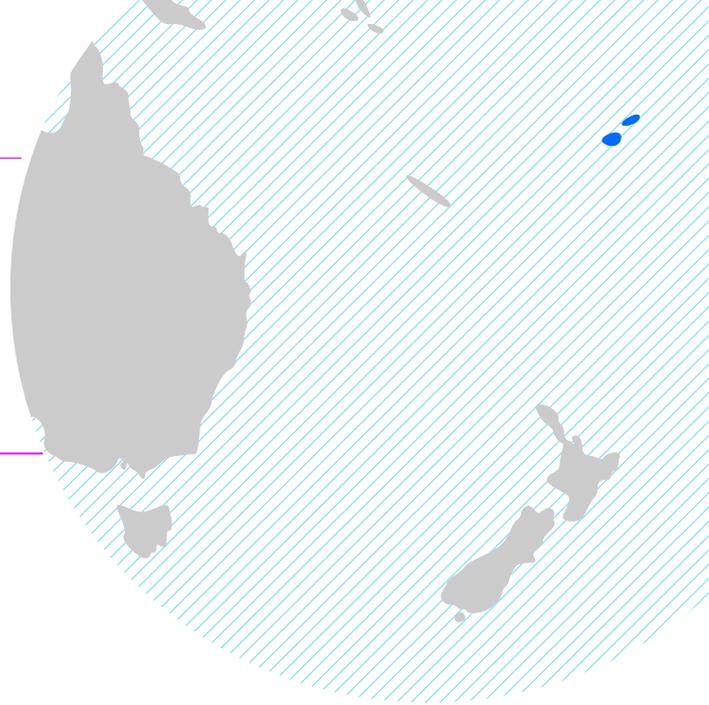
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Key takeaways

- The launch of the AI Hub in 2024 (Australia Fiji Business Council, 2024) and approval of the *National Digital Strategy 2025–2030* (Government of Fiji, 2025) signals that Fiji is moving from donor-driven projects to a systemic, nationally led approach to digital transformation.
- Fiji's relatively high internet penetration (85 percent of the country being online) positions it well for scaling AI adoption. However, infrastructure gaps in high-performance computing and secure data storage remain barriers.
- The government's commitment to developing an AI user protection framework (Fiji Times, 2024a) and alignment with regional digital economy strategies underscores its recognition that ethics and accountability must accompany technological innovation.

Fiji, a small island developing state in the Pacific, is acutely aware of the transformative potential of digital technologies and AI. The country's science and research ecosystem has historically been modest, with activities focused on climate resilience, sustainable development and regional higher education through the University of the South Pacific (USP). Over the last five years, Fiji has shifted from being a passive recipient of donor-led digital projects to actively shaping its own digital future. The AI Hub initiative, launched in 2024, and the Cabinet's approval of the *National Digital Strategy 2025–2030* represent turning points in this journey (Australia Fiji Business Council, 2024; Government of Fiji, 2025). These initiatives reflect Fiji's recognition that AI can serve as both a tool for resilience against existential climate threats and as an economic driver. At the same time, the country faces the challenge of embedding AI within a constrained fiscal and institutional environment, with governance frameworks still being developed.

Opportunities and challenges

AI offers Fiji clear opportunities across several priority areas. In climate science, AI-enhanced models and geospatial mapping are already being piloted to improve cyclone forecasting, coastal erosion monitoring and disaster preparedness. For example, a model

has been developed by Tractable and the UN Capital Development Fund's Pacific Insurance and Climate Adaptation Programme. One application of this AI-enhanced model is in rapid damage assessment and claims verification after cyclones and floods – local residents in Fiji can use a smartphone app to upload photos of property damage immediately after an extreme weather event such as a cyclone or flood. Tractable's AI tool then analyses the images to automatically verify the extent and nature of the damage, speeding up insurance claim settlements to days rather than months (Tractable, 2022). This rapid assessment helps households and small businesses receive funds quickly to begin rebuilding and supports more resilient disaster recovery in climate-vulnerable communities (Tractable, 2022).

In health care, where Fiji faces high burdens of non-communicable diseases, AI tools support predictive diagnostics and telemedicine services, particularly in remote islands (FBC News, 2023; Pacific Islands AI, n.d). Education is another opportunity area: USP is gradually introducing AI modules into computer science and engineering curricula, often in collaboration with partners in Australia and New Zealand through the Global Partnership in Education (University of the South Pacific, 2025; Pacific Region, 2025).

However, the challenges remain significant. Limitations in infrastructure persist, particularly reliable broadband connections in the outer islands and the absence of high-performance computing facilities. Skills shortages and brain drain undermine efforts to build a domestic AI workforce, as many graduates pursue careers abroad. Policy and regulatory gaps are also acute: while Fiji has a *Data Protection Act*, there are no AI-specific laws governing algorithmic accountability, bias or safety. Finally, funding remains a critical barrier.

Institutional arrangements and stakeholders

The development of AI in Fiji involves a broad range of stakeholders. The Ministry of Communications leads digital transformation, supported by the Ministry of Education, which oversees higher education and research, and the Ministry of Economy, which allocates funding. USP plays a pivotal role as the region's leading higher education institution, providing training, research and pilot projects in AI applications related to climate resilience and sustainable development. The private sector, while still nascent, includes telecom companies and fintech startups that are beginning to explore AI-driven solutions for mobile banking and e-government services. Development partners such as the Asian Development Bank, World Bank and United Nations Educational, Scientific and Cultural Organization (UNESCO) continue to play a critical role, providing financial resources, technical expertise and governance frameworks (UNESCO, 2021). Regionally, the Pacific Islands Forum Secretariat has incorporated AI and digital transformation into its broader digital economy agenda, reinforcing Fiji's role as a potential leader in the Pacific.

Ethical and transparency considerations

Fiji is still in the early stages of addressing the ethical and transparency challenges associated with AI. In 2024, the government announced its intention to develop a framework for protecting AI users, acknowledging risks of bias, discrimination and opaque decision-making in imported systems. Civil society and academic stakeholders have raised concerns

about the lack of local capacity to audit or evaluate AI systems, warning that reliance on external vendors will create vulnerabilities. UNESCO’s recommendation on the ethics of AI provides a useful template for adaptation (UNESCO, 2021), and regional dialogues are beginning to highlight the importance of embedding fairness, accountability and transparency into Fiji’s digital transformation journey.

Capacity building and funding

Building capacity is perhaps the single most pressing challenge for AI and the science ecosystem in Fiji. While USP has introduced courses in machine learning and data science, these remain limited in scope, and opportunities for postgraduate specialization are scarce. Scholarships offered by Australia and New Zealand allow students to pursue AI studies abroad, but the risk of brain drain remains. Funding constraints further exacerbate the problem. Donor support, such as the Asian Development Bank’s Pacific Approach 2021–2025 (Asian Development Bank, 2022) and the World Bank’s Fiji Digital Government Transformation Project (World Bank, 2021), has been instrumental, but there is still no dedicated national budget line for AI research and development. Without sustained funding and clear prioritization, Fiji risks seeing its AI ambitions stall.

AI-augmented science

Although Fiji’s AI ecosystem is still in its early stages, there are notable signs of progress in science and applied research, especially in agriculture, environmental monitoring and institutional capacity building (Prasad and Pratap, 2023; Kumar, 2024; GGGI, 2022). These developments show how AI can be leveraged to address some of the country’s most pressing challenges.

Fiji has begun introducing AI and Internet of Things tools into agricultural research through the Centre for Agriculture Technology Transfer (Pacific Islands News Association, 2024), supported by international partners. These smart farming (Fiji Times, 2024b) initiatives use AI-powered systems for real-time irrigation control, crop health monitoring and yield optimization. Pilot projects in sugarcane and vegetable production aim to increase productivity and reduce resource use, strengthening food security in climate-vulnerable communities.

AI is also being integrated into environmental science. A recent machine learning study applied AI-enabled landcover classification and change detection in western Fiji, demonstrating how AI can enhance cyclone risk assessment, coastal erosion monitoring and disaster preparedness (Gurjar et al., 2025). These tools can complement Fiji’s national climate adaptation strategies by providing more precise, real-time data (Gurjar et al., 2025).

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Achievements and next steps

Despite constraints, Fiji has made notable progress. The launch of the AI Hub in 2024 represents a significant institutional innovation, designed to consolidate resources, training and partnerships under one umbrella. The *National Digital Strategy 2025–2030* lays out a roadmap for scaling digital transformation, with AI integrated into its vision.

Achievements also include relatively high rates of internet connectivity, ongoing curriculum development at USP and explicit government acknowledgment of the need for AI governance frameworks. Looking ahead, Fiji must operationalize these commitments. Key next steps include finalizing and implementing an AI ethics framework, investing in cloud and computing infrastructure, expanding training and retention measures for domestic talent, and mobilizing research funding. Regional collaboration with other Pacific small island developing states will be essential to pool resources and expertise.

In conclusion, Fiji is moving from a peripheral player in the global digital landscape towards becoming an active participant in AI development within the Pacific. Recent research applications in agriculture, environmental monitoring and health demonstrate that Fiji's emerging AI ecosystem is already translating innovation into practical solutions, providing a foundation for broader national adoption. The AI Hub and digital strategy represent turning points, but without sustained funding, robust governance frameworks and capacity building, the momentum may falter. With targeted investment and regional collaboration, Fiji has the potential not only to strengthen its own science and research ecosystem and to serve as a model for other small island developing states facing similar constraints and opportunities.

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