

AI & Sustainable Future Challenge • Singapore

AI meets Southeast Asian sustainability — an undergraduate innovation challenge in the region's most advanced Smart Nation environment

Singapore is Southeast Asia's most instructive laboratory for applied AI. In a single city-state, delegates can walk from a smart-nation traffic operations centre to an AI-native corporate campus to a green university precinct that runs on real-time environmental sensing. Nowhere else in the region compresses the full stack — policy, infrastructure, industry, education — into an equivalent radius.

The AI & Sustainable Future Challenge · Singapore places undergraduate delegates inside this stack for seven intensive days. Hosted on the National University of Singapore (NUS) campus and structured as an innovation challenge from day one, the programme runs a live competition track alongside expert lectures, corporate visits and site-based investigation.

This is the undergraduate anchor of GYLDC's AI & Digital Governance pillar and a direct pipeline into the annual AI for Future Global Youth SDGs Innovation Summit. Delegates who distinguish themselves in Singapore progress into the wider GYLDC ecosystem of UN convenings, publication opportunities and follow-on programmes.

PROGRAMME AT A GLANCE	
PILLAR	AI & Digital Governance
PRIMARY TIER	Undergraduate
AVAILABLE FOR	All tiers (separate cohorts)
DURATION	7 days
NEXT ITERATION	July 2027
LOCATION	Singapore
LANGUAGE	English
COHORT SIZE	30–40
CERTIFICATION	GYLDC + GSLDC



◎WHAT PARTICIPANTS EXPERIENCE

The programme opens with an immersive introduction to the NUS Green Campus, where AI is applied to energy management, water systems and biodiversity monitoring in real operational settings. From day two, delegates enter the innovation challenge track, forming teams that will develop, refine and defend an AI-for-SDG solution over the course of the week. Site visits to Singapore's Smart Nation landmarks, AI-driven enterprises and public-sector innovation centres feed directly into each team's work. The programme culminates in an expert-adjudicated final on day seven.

◎WHY GYLDC

This programme I -organised by Global SDGs and Leadership Development Center (GSLDC) — the same institutional partnership behind GYLDC's AI Governance Immersion · Geneva. Delegates gain not only access to Singapore's institutional ecosystem but entry to a two-tier AI leadership pathway.

◎WHO THIS IS FOR

This programme is designed for undergraduate students in their second, third or fourth year of study, and for exceptional first-year students with demonstrable engagement with AI, sustainability or Southeast Asian development. The programme is deliberately cross-disciplinary — it does not require a computer-science background.

◎LEARNING OBJECTIVES

By the conclusion of the programme, participants will have:

- Developed a working understanding of how AI is applied at scale in a Smart Nation context — traffic, energy, water, urban services, education, healthcare — and the governance frameworks that make it possible.
- Produced and defended, as a team, an original AI-for-SDG innovation proposal evaluated by a panel of UNDP experts, university faculty and industry executives.
- Established direct engagement with Singapore's AI enterprises and public-sector innovation centres, and formed a peer network of delegates from across China and Southeast Asia.
- Acquired hands-on competence in the workflow of an innovation challenge — problem framing, rapid prototyping, pitch construction, expert critique — that transfers directly to internship, hackathon and career settings.

◎COMPETENCY FRAMEWORK

The programme develops six core competencies:

✓ **Creativity**	✓ **Decision-making**	✓ **Pitching & Communication**
✓ **Design Thinking**	✓ **Collaboration**	✓ **Execution**

◎CURRICULUM ARCHITECTURE

The programme's architecture places the innovation challenge at the centre, with pre-programme preparation, on-site immersion and post-programme continuation designed to feed into it. Every site visit, every expert lecture and every workshop is designed to advance the delegates' capstone project.

PHASE 1	PHASE 2	PHASE 3
Pre-Programme Online Module	*On-Site Immersion in Singapore*	*Innovation Challenge Final*
≈ 2–3 hrs / week · 3 weeks (6–8 hrs)	**7 days on-site · Singapore**	**Day 7 · challenge final**
▸ Foundations of AI applied to sustainability ▸ The ASEAN digital and Smart Nation policy landscape ▸ Case studies: AI for education equity, climate, health ▸ Innovation challenge framework and evaluation criteria ▸ Delivered by UNDP specialists and visiting academic faculty ▸ 6–8 hours across three weeks, culminating in team formation	▸ NUS Green Campus — AI applied to energy, water, biodiversity ▸ Smart Nation site visits — traffic operations, urban services ▸ AI enterprise visits — corporate labs, applied AI product teams ▸ City Walk investigation with structured field observation ▸ Daily coaching sessions and team stand-ups ▸ International Youth Dialogue with Singapore and ASEAN peers	▸ Team submission: proposal, pitch video, campaign poster ▸ 10-minute defence before expert panel ▸ Winning teams: AI for Future Summit progression ▸ Publication of winning proposals in IJYS (ijys.org) ▸ Introduction to internship placement pipeline

◎SIGNATURE INSTITUTIONAL PARTNERS

National University of Singapore (NUS)

The programme's host institution; delegates are based on the NUS campus for the duration, with sessions on the Green Campus initiative, the NUS AI Institute, and the Lee Kuan Yew School of Public Policy.

Smart Nation Singapore Office

Working session with the government agency coordinating Singapore's national AI and digital strategy; delegates observe how a whole-of-government approach to AI is designed and operated.

Singapore AI Enterprises

Structured visits to Singapore-based AI companies — corporate labs, applied product teams, and enterprise AI deployments. Confirmed hosts vary by cohort but include multinational and Singapore-headquartered firms.

◎SAMPLE ITINERARY

DAY	FOCUS	SIGNATURE ACTIVITIES
Day 1	**Arrival & Orientation**	Arrival in Singapore; check-in at NUS residence; welcome reception; Singapore in context — an introductory briefing on the Smart Nation vision.
Day 2	**Opening & Challenge Launch**	Opening ceremony; keynote by UNDP specialist; innovation challenge briefing and team formation; team-building activities; plenary on AI for sustainable development.
Day 3	**AI on the Green Campus**	NUS Green Campus field investigation — energy, water, biodiversity sensing; workshop on smart-campus AI architectures; team problem-framing session.
Day 4	**AI in the Smart Nation**	Smart Nation site visits — traffic operations centre, urban services innovation lab; City Walk field investigation; teams refine their proposal framing.
Day 5	**AI in the Enterprise**	Visits to Singapore AI enterprises — corporate labs, product teams; hands-on demonstration sessions; teams incorporate industry insights into their proposals.
Day 6	**Communication & Craft**	Workshops on pitch video production, campaign poster design, and public presentation; PPT preparation; rehearsal and expert coaching.
Day 7	**Final & Closing**	Innovation challenge finals — team presentations, expert adjudication; International Youth Dialogue Rounds I & II; awards ceremony; certification; closing dinner.

◎WHAT PARTICIPANTS RECEIVE

Formal Certification

Certificate of Completion co-signed by GYLDC and GSLDC, valid for academic and professional credit recognition.

Letters of Recommendation

Winning-team members and outstanding individual delegates receive personal letters of recommendation from UNDP specialists or named faculty.

AI for Future Summit Pathway

Winning teams progress directly into the annual AI for Future Global Youth SDGs Innovation Summit (Hong Kong, every January), with cohort travel support where available.

Publication Opportunities

Winning innovation proposals published in the International Journal of Youth & Sustainability (ijys.org), with editorial support from GYLDC faculty.