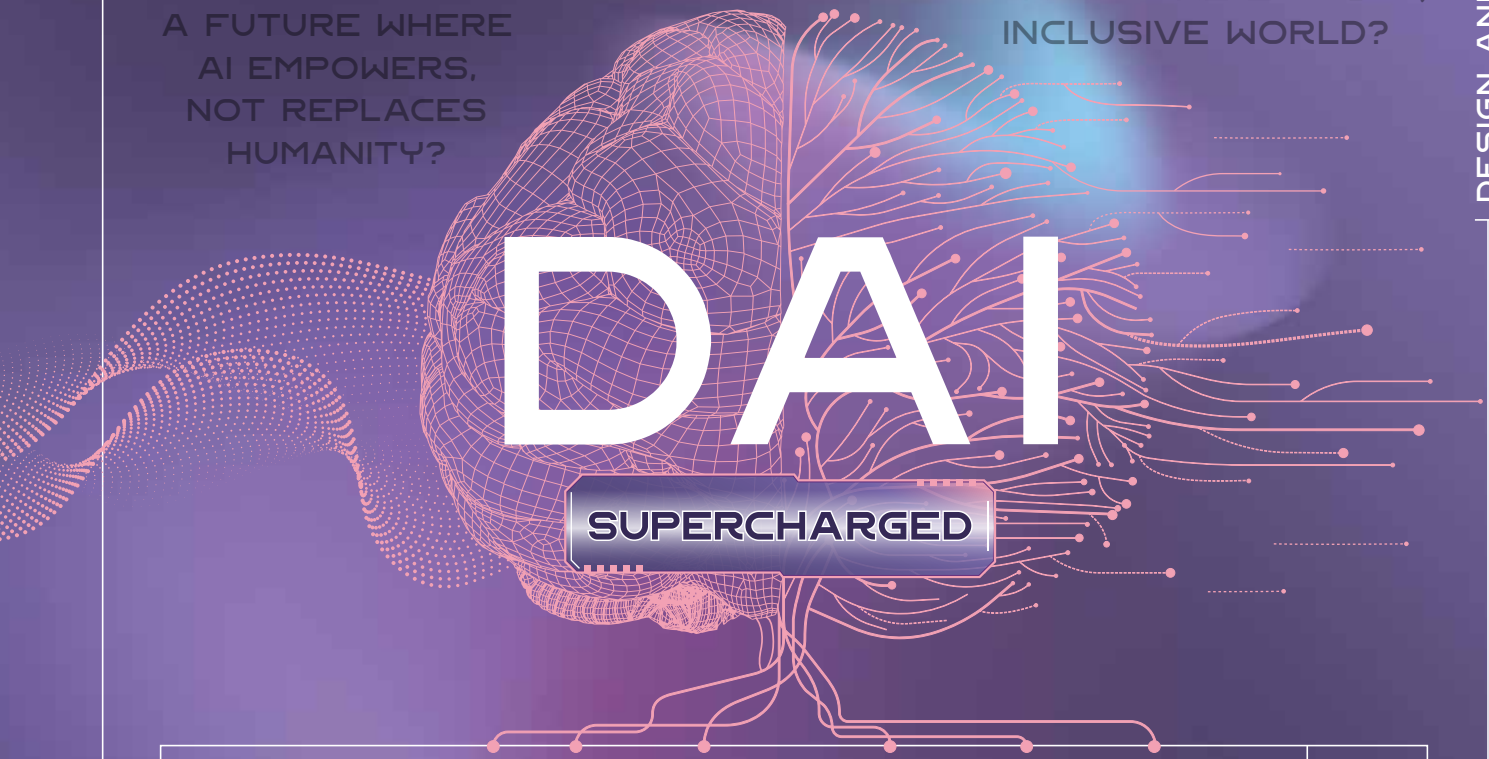
SINGAPORE UNIVERSITY OF TECHNOLOGY AND DESIGN

DESIGN AND AI

CAN YOU DESIGN A FUTURE WHERE AI EMPOWERS, NOT REPLACES HUMANITY?

WHAT IF YOU BRIDGED TECH AND HUMANITY FOR A MORE ETHICAL, INCLUSIVE WORLD?



DAI

SUPERCHARGED

WHAT IF HUMANS AND AI CAME TOGETHER TO SHAPE HOW WE LIVE, WORK, AND CONNECT?

HOW CAN Design·AI INNOVATE WITH HUMAN IMAGINATION AND MACHINE INTELLIGENCE?

SUTD.EDU.SG/DAI

TRAILBLAZING A BETTER WORLD BY DESIGN.

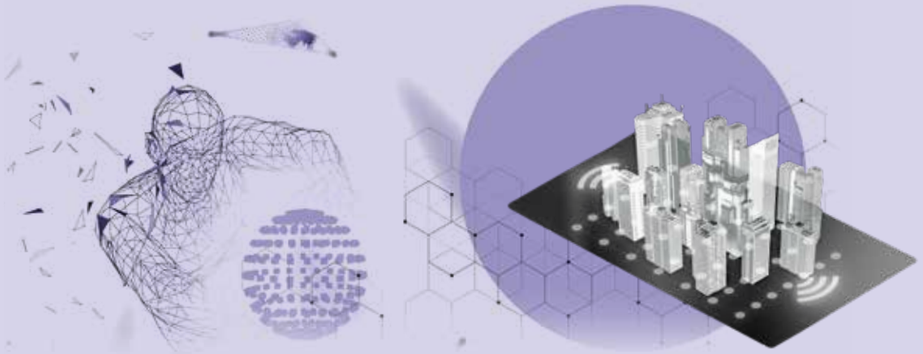
OTHERS TEACH AI AS A TOOLSET. WE TEACH AI AS A MINDSET.

The AI future that used to be called Science Fiction, is Here. Is Now.

At the world's first Design·AI university, built for the new AI world, AI isn't just a skillset—it's a mindset. Our students don't just find innovative solutions to problems—they design solutions for new-world problems using new-world skills!

At SUTD, you will learn when to harness AI, when to refine it, and when to rethink it—guided by human-centred design.

SUTD'S DESIGN AND ARTIFICIAL INTELLIGENCE (DAI) PROGRAMME —NOW SUPERCHARGED



WHAT IF DESIGN AND AI DIDN'T JUST COEXIST, BUT CO-EVOLVED?

Imagine a world where AI doesn't just automate tasks, but works hand in hand with human ingenuity to tackle society's most complex challenges.

This is the vision behind SUTD's revamped, next-generation **DAI programme—a supercharged evolution** of our pioneering model of innovation. By fusing **design thinking, AI, and human intelligence**—cognitively, culturally and economically—DAI equips learners to transform **technology, business, and society** for a smarter, more human-centred future.

SUTD's DAI degree is relevant in building a pipeline of **multi-disciplinary data scientists and AI engineers.**

+++ Mr Johnson Poh
Executive Director & Head Enterprise AI, United Overseas Bank

THE FIRST Design·AI UNIVERSITY FOR THE NEW WORLD

Design·AI IS IN ALL SUTD PROGRAMMES —SPANNING EDUCATION, RESEARCH, AND ENTERPRISE.

A WORLD-FIRST CURRICULUM IN Design·AI

SUTD's refreshed Design and Artificial Intelligence (DAI) programme prepares students for a future in which human creativity and AI capabilities work seamlessly together. Rather than viewing AI only as a technical tool, the programme helps students develop an AI-aware mindset—understanding how to use, improve, and critically evaluate AI in the design of real-world solutions. By combining design thinking, technological skills, and insights into how people and systems interact, DAI equips students to create innovations that are both intelligent and deeply human-centred.

Building on this foundation, the DAI programme introduces two new tracks that reflect the future of design—where creativity meets computation and social insight drives innovation.

The **Societal and Systems Intelligence** track integrates Economics, Business, and AI to address complex systemic challenges, while the **Human-Centred Intelligence** track draws from Psychology, Philosophy, and Human-AI Interaction to advance more empathetic and ethical technologies. Together, these pathways prepare students to harness the full potential of human and artificial intelligence—creating industry solutions that are as thoughtful as they are transformative.

DAI graduates enter the workforce equipped with a powerful combination of design innovation, AI fluency, and human-centred thinking—a powerful repertoire for tackling open-ended challenges in an AI-driven world. Like their peers in other SUTD majors, DAI graduates are not just "bilingual" in expert domain knowledge and AI capabilities. They are effectively "trilingual", integrating domain expertise, AI mastery, and design thinking. This trilingual fluency empowers them to bridge technology and humanity—solving problems creatively and delivering practical, impactful solutions for real-world challenges.

Over your first three Freshmore terms, you'll build a strong foundation in Science, Mathematics and Technology (SMT), Humanities, Arts and Social Sciences (HASS), and Design·AI through our reimagined Freshmore curriculum. From day one, courses integrate Design with AI to strengthen both technical depth and human-centred skills, giving you the solid foundations and readiness not only for your DAI major but also for life beyond graduation.

Graduate with a Bachelor of Science in Design and Artificial Intelligence

In addition, you are encouraged to take courses during your Freshmore terms such as Introduction to Human-Centred Design, and Qualitative & Quantitative Research Methods, to develop both empathetic and analytical ways of thinking—learning to understand people, interpret data, and Design·AI solutions that are ethical, adaptive, and grounded in real-world needs.

New options in key Freshmore courses let you tailor your journey to match your interests: the (E) option for courses with a stronger focus on engineering applications, or the (S) option for courses with a stronger focus on social sciences applications. DAI students can take either the (E) or (S) option. This flexibility ensures you can pursue a customised path that aligns with your interests and strengths, helping you thrive at SUTD and prepare for an excellent career. *(See DAI Curriculum table for details.)*

Every undergraduate completes multiple design projects throughout their DAI journey at SUTD. These experiences culminate in a two-term Capstone project in the final year, where you'll collaborate with students from other majors and apply your DAI skills to either a client-sponsored industry project or your own entrepreneurial venture, creating solutions that make a real impact. Graduates leave with an extensive portfolio of industry-inspired projects, ready to launch their careers.

The DAI programme is creating a new kind of talent—innovators who combine AI fluency with economic insight and human understanding. **This is exactly the skillset needed to drive meaningful innovation, build resilient businesses, and shape sustainable growth in the AI economy.**

+++ Ms Jenny Lee
Senior Managing Partner, Granite Asia Capital Pte. Ltd.

DAI CURRICULUM

JAN-APR	MAY-AUG	SEP-DEC
Freshmore Subject Core Subject Humanities, Arts and Social Sciences (HASS) Subject Elective Capstone	Y1 Y2 Y3 Y4	**TERM 1** Innovating with Design & AI 1 Introduction to Programming Calculus Sustainability: Science and System Thinking Introduction to Social Sciences/Global Humanities
TERM 2 Innovating with Design & AI 2 Algorithmic Thinking & Object-Oriented Programming Linear Algebra & Multivariable Calculus **(E or S)** Physics Principles and Applications 1 Introduction to Social Sciences/Global Humanities	**TERM 3** Innovating with Design & AI 3 Introduction to Machine Learning Introduction to Probability and Statistics **(E or S)** Any Two Electives*	**VACATION**
TERM 4 Design Studio 1 AI Applications in Design Principles of Economics in the Age of AI# Mind, Machines & Design#	**TERM 5** Design Studio 2 Human Computer Interaction and AI Track Elective Track Elective	**VACATION/ INTERNSHIP/ EXCHANGE**
TERM 6 Track Elective Track Elective Track Elective Elective+	**VACATION/ INTERNSHIP/ SUMMER PROGRAMME**	**TERM 7** Capstone Track Elective Track Elective Elective+
TERM 8 Capstone Track Elective Track Elective Elective+		

***Term 3 Electives:**
- Design Computation
- Designing Sustainable Energy Solutions
- Freshmore Design Studio
- Introduction to Discrete Mathematics
- Introduction to Healthcare Technology
- Introduction to Human-Centred Design
- Physics Principles and Applications 2
- Qualitative & Quantitative Research Methods

Students are guided on electives that match their learning interests, while retaining the flexibility to chart their own path.

MINOR PROGRAMMES

Our range of minors offers you more choices and flexibility in pursuing your broader interests.

- **Minor in Analytics and AI (AAI)**
- **Minor in Computer Science (CS)**
- **Minor in Design, Technology and Society (DTS)**
- **Minor in Digital Humanities (DH)**
- **Minor in Healthcare Informatics (HI)**
- **Minor in Human-Centred Design (HCD)**
- **Minor in Psychology & Business Management (PBM)**
- **Minor in Sustainability by Design (SD)**

Students will indicate their choice of minor at the end of Term 3.
Information is subject to change. Visit sutd.edu.sg/minors for latest updates.

> It's been an amazing experience working with the students. They **showed professionalism in both technical and project management aspects** which are essential skills in today's design and tech industry. It is always an eye opener to hear fresh perspectives from them and the management is impressed with the quality of ideas. Looking forward to more opportunities to work with them!
>
> **+++ DBS Bank Ltd**

> The students' independence and resourcefulness in finding innovative solutions were remarkable. They confidently approached problem-solving with **a unique and fresh perspective, reflecting their innate creativity and passion for their work.**
>
> **+++ AMD**

The following modules are available in Term 4 if you do not select the **Societal and Systems Intelligence** or **Human-Centred Intelligence** tracks:
- Algorithms
- Machine Learning

+ In Terms 6 to 8, students can take up to three unrestricted electives, providing the flexibility to broaden their learning, deepen their expertise, or pursue a Computer Science minor.

- In addition to all subjects in Term 1 being grade-free (Pass/No Record), students can choose up to four more subjects from Terms 2 and 3 to be grade-free.

- Students will declare their choice of major at the end of Term 3.

Information is subject to change. Visit sutd.edu.sg/dai for latest updates.

FUTURE POSSIBILITIES

CAREERS

The world's first cohort of Design·AI students graduated in May 2024 and have secured roles in a broad spectrum of industries including e-commerce, telecommunications, aviation, consulting, semiconductor, and defence technology.

The Design·AI skills they have garnered over the course of their time in SUTD have enabled them to take on diverse roles in various industries.

POSITIONS HELD BY DAI GRADUATES:

- Business Consultant
- Business/Technology Analyst
- Data Scientist
- Mechanical Design Engineer
- Network Planning Analyst
- Product Manager
- Product Developer
- Product Designer
- Project Manager
- QEM (Quality Engineering Management) Engineer
- Research Engineer (AI)
- Software Engineer
- Solutions Architect
- Web Developer

WHERE DAI GRADUATES ARE MAKING AN IMPACT:

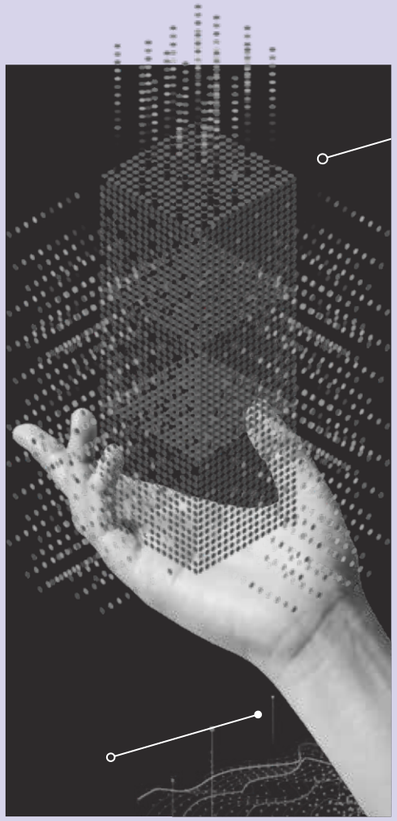
- Abiman Robotics
- Accenture
- ALBA Group Asia
- DBS Bank
- DSO National Laboratories
- GSK
- Kingsmen
- Ministry of Home Affairs
- Micron
- Red Hat Software
- SAA Architects
- Scoot
- Shopee
- Singtel

We are **very happy with the idea that the team has come up** with and with what they have learned and achieved in such a short period of time.

+++ P&G Singapore

This programme blends foundational knowledge with real-world applications and examines the impact of AI on society. As someone with 15 years of experience in IT, collaborating extensively with Product Managers, I believe this innovative degree is invaluable preparation for future PMs, lawmakers, or AI marketers. **I'd gladly hire such graduates.**

+++ Andrey Leskov
Co-founder and CEO of illumi.one



TRANSFORMING THE WAY WE LIVE:

BETTER DESIGN WITH AI BY SUTD FACULTY AND STUDENTS

AI-DRIVEN ELECTRIC RACE CAR DESIGN

Meticulously designed and developed in Fusion 360—a fusion of both Computer-Aided Design and Generative Design—this electric race car design is the culmination of extensive research, thorough scrutiny from every conceivable angle, and numerous iterations. Its final form has been fine-tuned and optimised, resulting in a sleek, powerful, and seamless appearance.

PREDICTION OF PASSENGER LOAD TO REDUCE FOOD CATERING WASTAGE

Creating a data analytics dashboard with the use of Machine Learning models that forecast passenger loads, along with a food calculator that forecasts the amount required and estimates total cost.

ACHIEVING SPATIAL AND DESIGN OPTIMISATION FOR ARCHITECTS

Harnessing AI-driven solutions to tackle challenges like data insufficiency, manual input, and precision, ArchitectMind.Ai empowers architects to achieve spatial optimisation and design distinctiveness.

OPTIMISING FLIGHT OPERATIONS

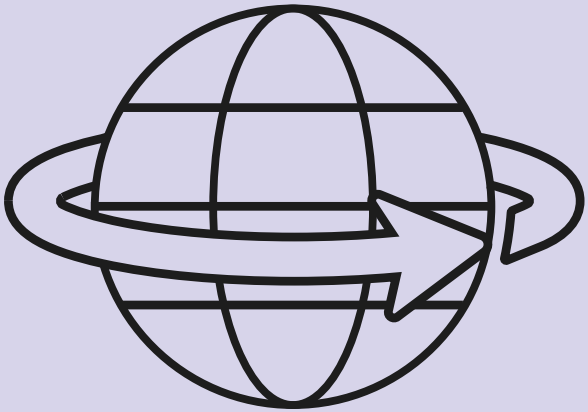
With innovative features, the Flight Operations Command App aims to transform the decision-making process for managing flight delays, taking a critical step towards optimising operations and enhancing customer satisfaction.

WORLD'S FIRST BILINGUAL GAME APP AIMED AT STAVING OFF DEMENTIA

Creating an Advancing Mental Invigoration (AMI) platform that harnesses psychological science and AI to promote healthy ageing by enhancing cognitive and social wellbeing. It features evidence-based cognitive games that boost mental agility through bilingual training, and an empathetic AI-powered virtual companion that reduces loneliness in older adults. Its adaptive system continuously personalises care recommendations, helping users stay mentally sharp and socially connected.

View more AI-driven design innovations

PREPARE TO TAKE ON THE WORLD



2 NEW TRACKS

YOUR TRACK WILL BE REFLECTED ON YOUR TRANSCRIPT SO THAT EMPLOYERS RECOGNISE YOUR ADDITIONAL EXPERTISE.

TRACKS OFFERED IN A GIVEN YEAR ARE SUBJECT TO CHANGE. CHOOSING A TRACK IS OPTIONAL.

SCAN TO FIND OUT MORE

SOCIETAL AND SYSTEMS INTELLIGENCE TRACK

ECONOMICS, BUSINESS AND AI

Understand, analyse and model complex economic and societal systems. You'll also learn to integrate insights from economics, data science, and systems thinking to address challenges such as sustainable growth, financial resilience, and equitable technological transformation.

HUMAN-CENTRED INTELLIGENCE TRACK

PSYCHOLOGY, PHILOSOPHY AND HUMAN-AI INTERACTION

Study how people think and act—individually and collectively—through psychology, cognitive science, behavioural economics, philosophy, and human-AI interaction. You'll explore the dynamics of human experiences, from perception and emotion to ethics and decision-making, to advance technologies that resonate with real human behaviour.

SINGAPORE UNIVERSITY OF TECHNOLOGY AND DESIGN

DAI CORE SUBJECTS

FOR ALL DAI MAJOR STUDENTS

- AI Applications in Design
- Human Computer Interaction
- Design Studios
- Capstone Project

FOR SOCIETAL AND SYSTEMS INTELLIGENCE/ HUMAN-CENTRED INTELLIGENCE TRACKS

- Principles of Economics in the Age of AI
- Mind, Machines and Design

LEARNING OUTCOMES OF DAI CORE

INTERDISCIPLINARY EXPERTISE

Combine perspectives on people, culture, and society with design fluency and technical AI skills to critically explore, creatively design, and innovatively shape the future applications of AI.

KNOWLEDGE OF DESIGN THEORIES & PRACTICES

Disrupt economies with your know-how in design theories and practices.

CRITICAL METHODOLOGIES FOR COMPLEX SOCIAL AND CULTURAL ANALYSIS

Cultivate advanced methodological expertise to interrogate complex economic, technological, social and cultural phenomena and reimagine economies, industries, and communities through integrated research and design approaches.

ETHICS AND EMPATHY IN DESIGN PRACTICE

Critically assess the ethical, cultural, and emotional dimensions of design decisions to foster responsible and context-sensitive innovation.

EFFECTIVE AI DEPLOYMENT

Enhance your ability to translate AI technologies into impactful, real-world applications.

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