

TIET-UQ Centre of Excellence in Data Science and AI

Centre Overview

The TIET-UQ Centre of Excellence in Data Science and AI is a cross-disciplinary research centre that advances foundational and applied research related to data science and AI, jointly located at Thapar Institute of Engineering & Technology in Patiala, India, and The University of Queensland in Brisbane, Australia. The work of the centre crosses both national boundaries (India and Australia) and disciplinary boundaries (computer science, engineering, behavioural science, health, agriculture and environment).

This document is a short outline of the proposed activities for the Centre in 2025.

Vision

Transforming industries and lives in India and Australia via innovation-led Data Science and AI.

Aims

The aims of the Centre are to:

- Bring Thapar Institute and the University of Queensland to the global forefront of research in AI and Data Science.
- Nurture the next generation of AI leaders through collaborative research and industry partnerships.
- Pioneer groundbreaking research in AI and data science to solve real-world challenges through collaborations with startups, companies, government, and not-for-profit organisations.
- Create AI applications that responsibly augment the capabilities of people and enhance quality of human life.
- Build capacity by attracting and training the bright and diverse next generation of research leaders in data science and AI.

People

Our leadership team



Inderveer Chana
Centre Director/ Executive Director/Head



Tim Miller
TIET-UQ Chair of Data Science

| Professor of Computer Science, TIET | Professor of Artificial Intelligence, UQ |
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| Inderveer is the Centre Director for the Centre of Excellence in Data Science and AI. She is the Professor of Computer Science in the department of Computer Science and Engineering at TIET, Patiala. Her research interests include Cloud computing, Energy aware computing and Machine Learning. She has more than 100 research publications in reputed Journals and Conferences. She has also worked on major research projects sponsored by Govt. funding agencies like UGC, AICTE, CSIR, DST, ICMR etc. | Tim is the TIET-UQ Chair of Data Science for the Centre of Excellence. He is a Professor of Artificial Intelligence at the University of Queensland. Tim's research draws on machine learning, reinforcement learning, AI planning, interaction design, and cognitive science, to help people to make better decisions. He has done work on areas including explainable AI, human-AI mixed-initiative planning, and human-centered decision support. |

Focus areas

The Centre has five main areas of focus, built from the expertise of its members:

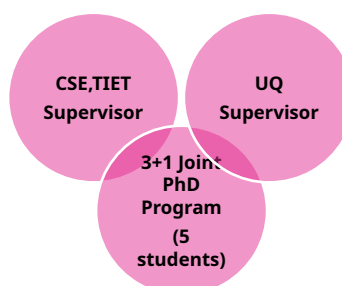
- 🎬 Health and medicine
- 🎬 Energy and environment
- 🎬 Cybersecurity
- 🎬 Behavioural science
- 🎬 Sustainable Infrastructure
- 🎬 Smart Agriculture

Funding

In year 1 of the Centre, we will primarily drive towards our aims for four programs.

Joint PhD program

Thapar Institute and The University of Queensland will embark on a new joint PhD program, where new PhD students enrolled into the program will attend 3 out of 4 years at Thapar, and spend 1 year at the University of Queensland. The PhDs will be jointly supervised by academic staff at each Institute. In the first year, the program will support 5 applicants in computer science, with the aim to expand this to other disciplines as the program becomes more successful in the coming years.



The University of Queensland Global Partnerships team is currently drafting a set of program rules that will be shared with the two Centre directors for discussion. We aim to start recruiting for this program by April 2025.

Centre PhD Travel scholarships

In February 2025, the centre will announce a call for PhD scholarship proposals to support 5 PhD travel scholarships for students starting in 2025 every year from any program/branch. Like the joint PhD program, funding will be available for travel between Thapar and the University of Queensland (once during PhD) and living cost support for the time spent in Brisbane/Patiala. PhDs will be awarded by Thapar Institute and each project will be jointly supervised by academic staff from both partner institutes.

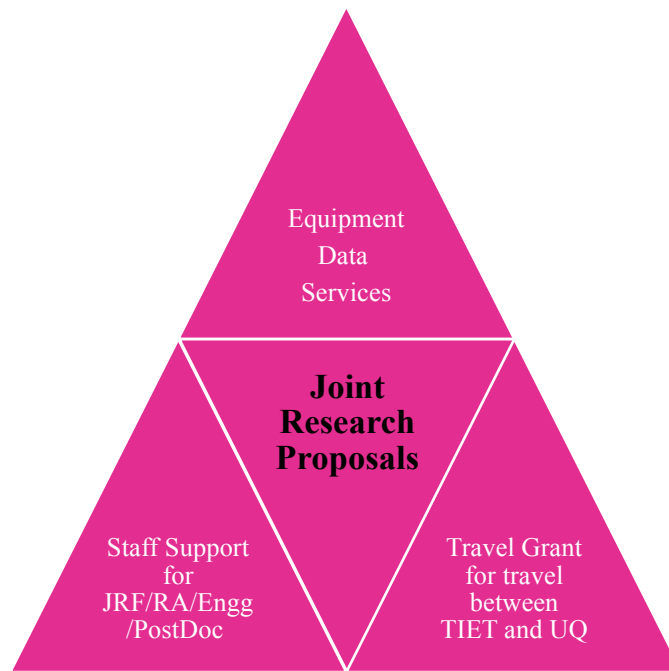
| PhD students of TIET (5 students) | |
|---|--|
| TIET Supervisor Travel Grant (once during the course) | UQ Supervisor Stay in Brisbane for 2 months (once during the course) |

Seed funding for Research Projects

In February 2025, the Centre will announce a call for seed funding proposals to support foundational and applied research in the five focus areas (health and medicine, environment and energy, cybersecurity, behavioural science, and sustainable infrastructure). Proposals will be for up to 2 years extendable to maximum 3 years. PI/Co-PI should be from TIET and UQ (Preferred).

Project funding will support for postdoctoral staff at TIET, JRF/RA/engineer support at TIET, reasonable equipment purchase, travel between Patiala and Brisbane (both ways), access to data, collection of data, cloud services, software subscriptions/access, and other reasonable requests.

Projects for seed funding will be selected by a Selection Board.



Industry collaborative research projects

In February 2025, the Centre will announce a rolling call for proposals to solve applied problems in conjunction with an industry partner. Projects must involve people from at least three organisations: TIET, UQ, and the industry partner. Industry partners can be from either country, or potentially a third country.

Project funding will be given to support postdoctoral staff at TIET, JRF/RA/engineer support at TIET, reasonable equipment purchase, travel between Patiala and Brisbane (both ways), travel to partner sites, collection of data, cloud services, software subscriptions/access, and other reasonable requests.

Industry partner organisations must provide matched funding* to the project for the proposal to be eligible, and where sensible, should provide in-kind support such as domain expertise, access to relevant data.

*Requests will be considered for less than matched funding in exceptional circumstances on a case-by-case basis; e.g. not-for-profit organisations, partners able to give access to significantly valuable data, etc.

| TIET | UQ | Industry |
|---|-----------------------------|---|
| Equipment, Data and Services Travel Contingency | Hosting researchers Data | Seed Funding Domain Expertise Data and Services |

Researcher Development

The Centre will run several small programs for career development of PhD students and early-career researchers

1. **Career development workshops:** Seminars from experienced researchers every two months on specific topics, such as academic writing, research methodologies, data analysis techniques, research project management, grant writing, communication skills, industry research opportunities, and researcher supervision.
2. **Annual colloquium:** Starting in year 2 of the centre, an annual showcase where PhD students and early-career researchers from across TIET can present their research, receive feedback, and network with staff and industry attendees. The colloquium will be organised by the PhD and early-career research (ECR) cohort in conjunction with the Centre Manager and Directors to give experience in conference organisations and planning.
3. **Summer school:** Starting in year 2 of the centre, an Annual Data Science & AI Summer School for students (PhD, undergraduate students doing research projects) at TIET and other universities that contains intensive courses on specialised topics, seminars, guest lectures, and hackathons. The summer school will be run jointly by the Centre Manager/Directors and the PhD/ECR cohort to ensure it meets the needs of the cohort.
4. **Mentorship program for PhD and early-career researchers (ECRs):** A formal mentorship program where PhD students and early-career researcher are paired with more experienced staff to provide mentorship and development, meeting approximately four times per year, plus a one-off introductory session.

Student Internship Program

Centre will offer internships to both UG and PG students for different durations:

- (i) For UG/PG students 4-6 weeks, 6 months.
- (ii) Apart from this PG students can be offered internship of one year duration in the second year too.

Visitor program

The Centre will provide funding each year for 1-2 high-profile researchers to visit Thapar for a period of a few weeks. A visiting researcher will be expected to contribute to the centre in several ways:

1. Giving a public seminar about their research.
2. Running a career development workshop for PhD and ECRs on a topic jointly negotiated with the Centre Directory or a hosting staff member.
3. Meeting with PhD students and ECRs in the Centre to provide guidance and mentorship.
4. Start collaborative research activities with researchers in the Centre.

Sample Contact page:

Contact us

If you are interested in working with the Centre for Data Science & AI, or you think you can support the Centre, please contact us at cdsai@glasgow.ac.uk. We are based in the Advanced Research Centre (ARC), Rm 474, University of Glasgow, 11 Chapel Ln, Glasgow G11 6EW.

[Sign up](#) to our mailing list for newsletters and information from the Centre about events, training and funding.