



Global Online Certification Course

Modelling and Building Digital Supply Chain Twins using anyLogistix 2023



Course Schedule:

Aug 23rd, 2023 - Aug 25th, 2023 &

Aug 28th, 2023- Aug 31st, 2023

6:30 PM - 9:30 PM IST

21 hours duration

Registration Deadline

15th August 2023



www.nitie.ac.in



[Register Here](#)

About the Course

Supply chain decisions significantly impact a company's success. Research in Supply Chain Management aims to provide data, tools, and models for informed choices. The digital twin concept offers a virtual representation of systems, using real-time data, simulation, and machine learning to aid decision-making.

This course will consider the digital twin perspective of supply chain optimisation using anyLogistix software, a tool that facilitates Greenfield Analysis, Network Optimization, and Simulation. It will introduce the concepts and principles of supply chain management by building anyLogistix models for supply chain design and resilience analysis using case studies.

With the rapid growth in IoT and cloud computing, and mounting needs to cut costs and reduce product development time, the digital twin is one of the fastest-growing concepts in Industry 4.0. This course can provide you with the foundation on how to structure, model and solve real management problems in Supply Chain and Operations.



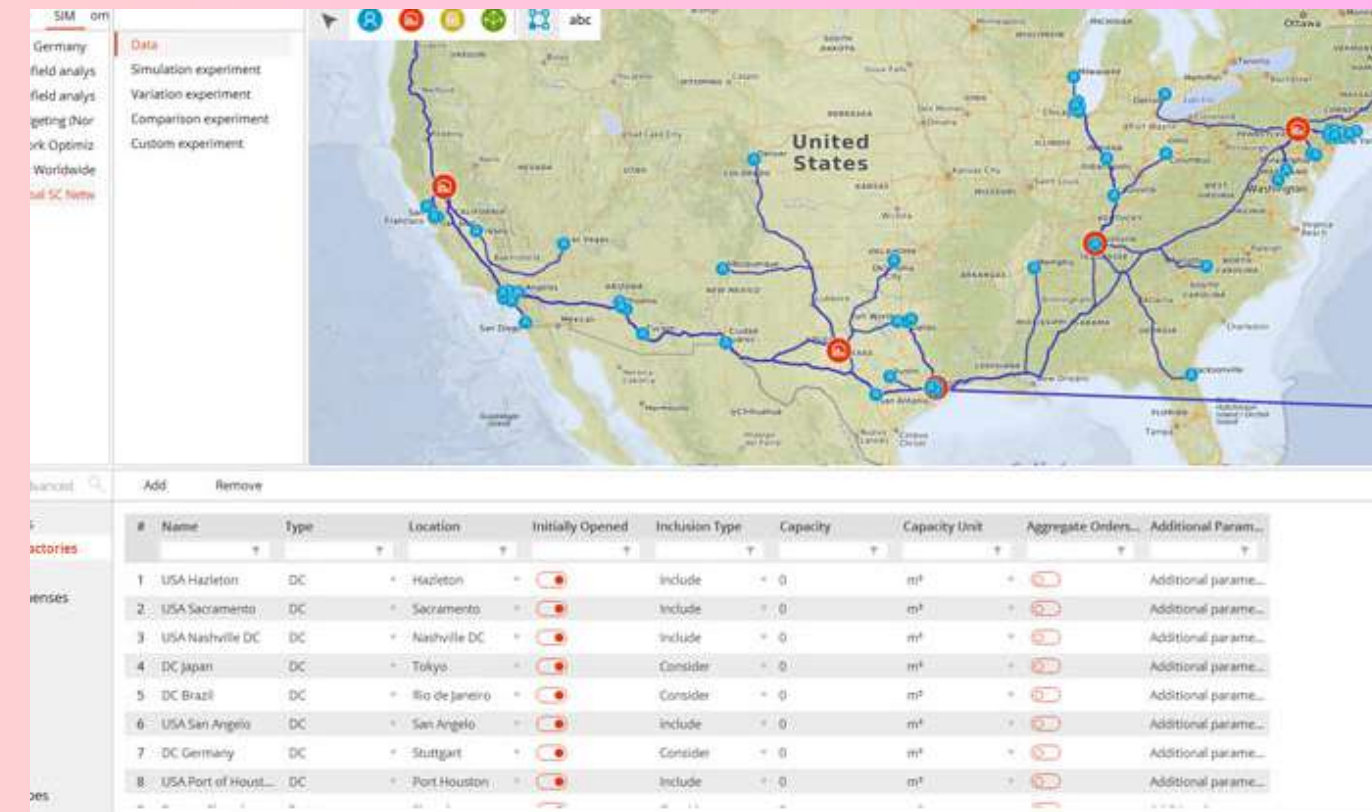
About anyLogistix

anyLogistix (ALX), by The AnyLogic Company, is a supply chain analytics software used for designing, optimizing and analyzing a company's supply chain. ALX combines powerful analytical optimization approaches together with innovative dynamic simulation technologies to offer a comprehensive set of tools for end-to-end supply chain analytics.



Features of anyLogistix:

- **Network Design & Optimization:** Carrying out Greenfield analysis to find the number of facilities and their locations with minimum data input.
- **What-if Scenario Dynamic Simulation:** Analyze time dependent factors, random events, actual system behavior, and dynamic interactions between elements of your supply chain.
- **Supply Chain Digital Twin:** Automatically gather data about your supply chain and configure your supply chain model's objects, processes, and entities.



- **Inventory Optimization:** Safety stock estimation experiment will help to find a balance between service level and cost-effectiveness.
- **Transportation Optimization:** Plan your transportation logistics at strategic and tactical levels.

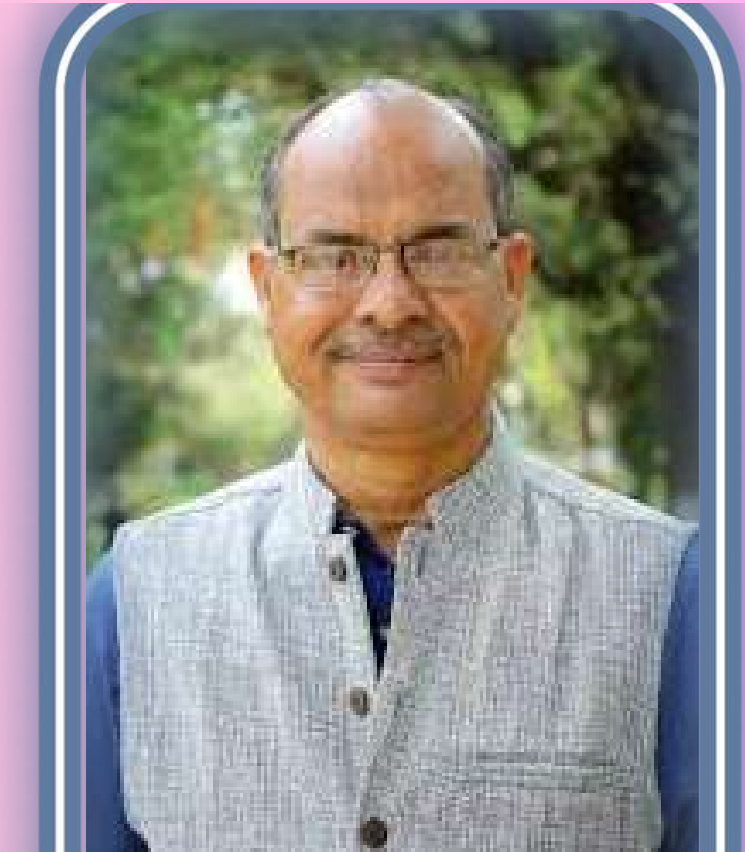
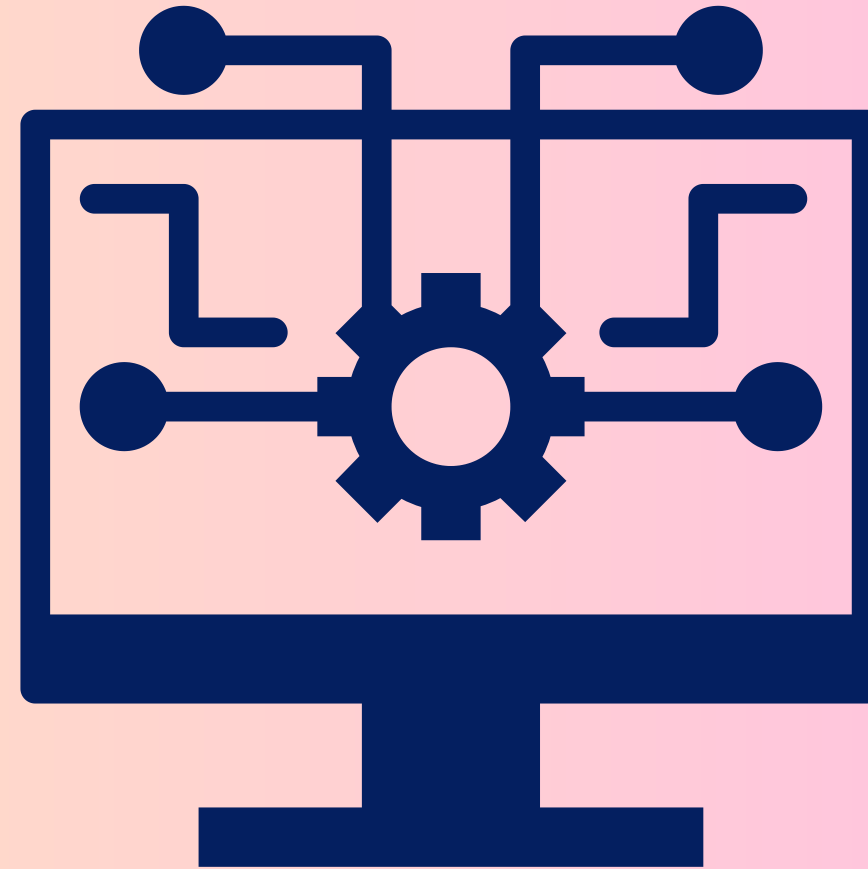


Course Instructors



Prof. Dmitry Ivanov

Professor of Supply Chain and Operations Management & Faculty Director of M.A. Global Supply Chain and Operations Management Program, Berlin School of Economics and Law, Germany



Prof. Manoj Kumar Tiwari

Director
National Institute of Industrial Engineering
(NITIE), Mumbai, India

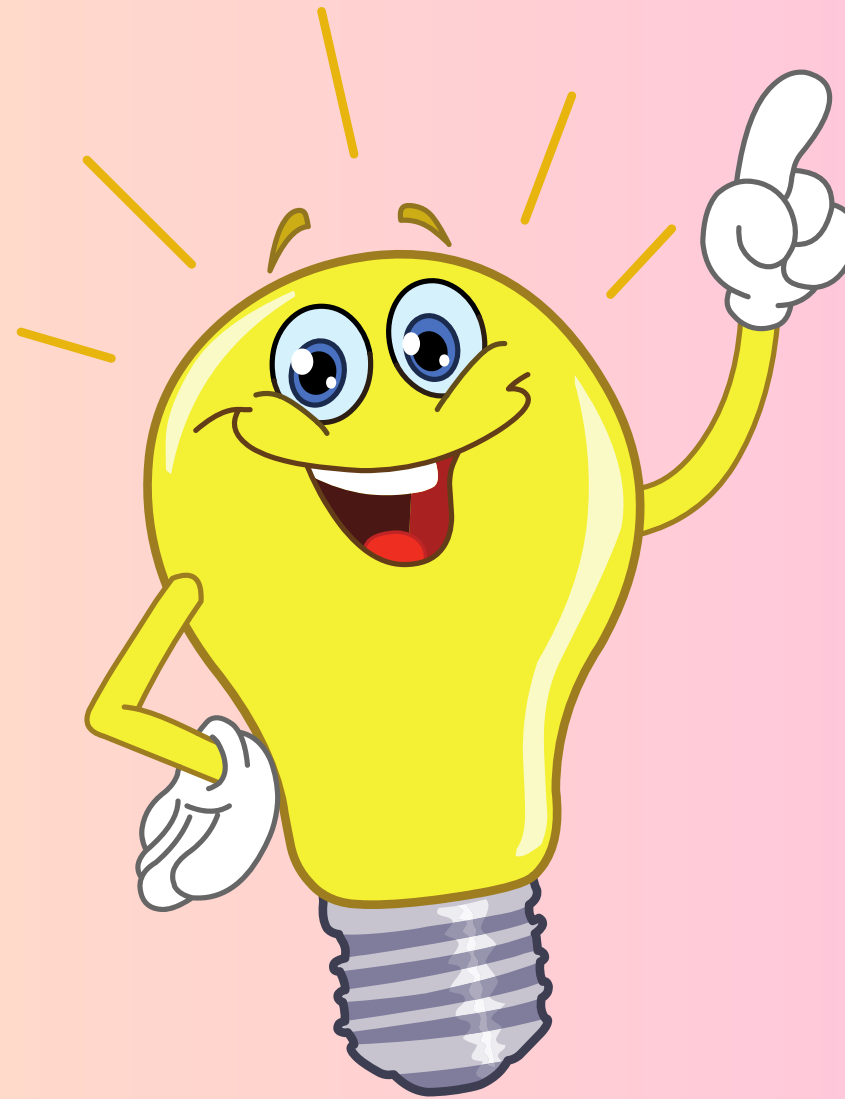


Course Highlights and Structure



Structure

- 23rd August 2023 - 25th August 2023 & 28th August 2023 - 31st August 2023
- 6:30 PM - 9:30 PM IST
- 21 Hours Course, 7 Sessions
- Live Via Webex



Highlights

- Lecture recordings will be provided for 1 week.
- Learn decision making techniques through exhaustive case studies.
- Perform Real-time Simulation to build and optimize global supply chains.
- Lecture slides and supplementary materials about SC modelling and digital twins.

Upon completion of the course, all registered participants will receive a Certificate of Completion from NITIE signed jointly by Prof. Dr. Dmitry Ivanov and Prof. Manoj K. Tiwari. Lecture attendance and quiz attempts will be the criteria for course completion.

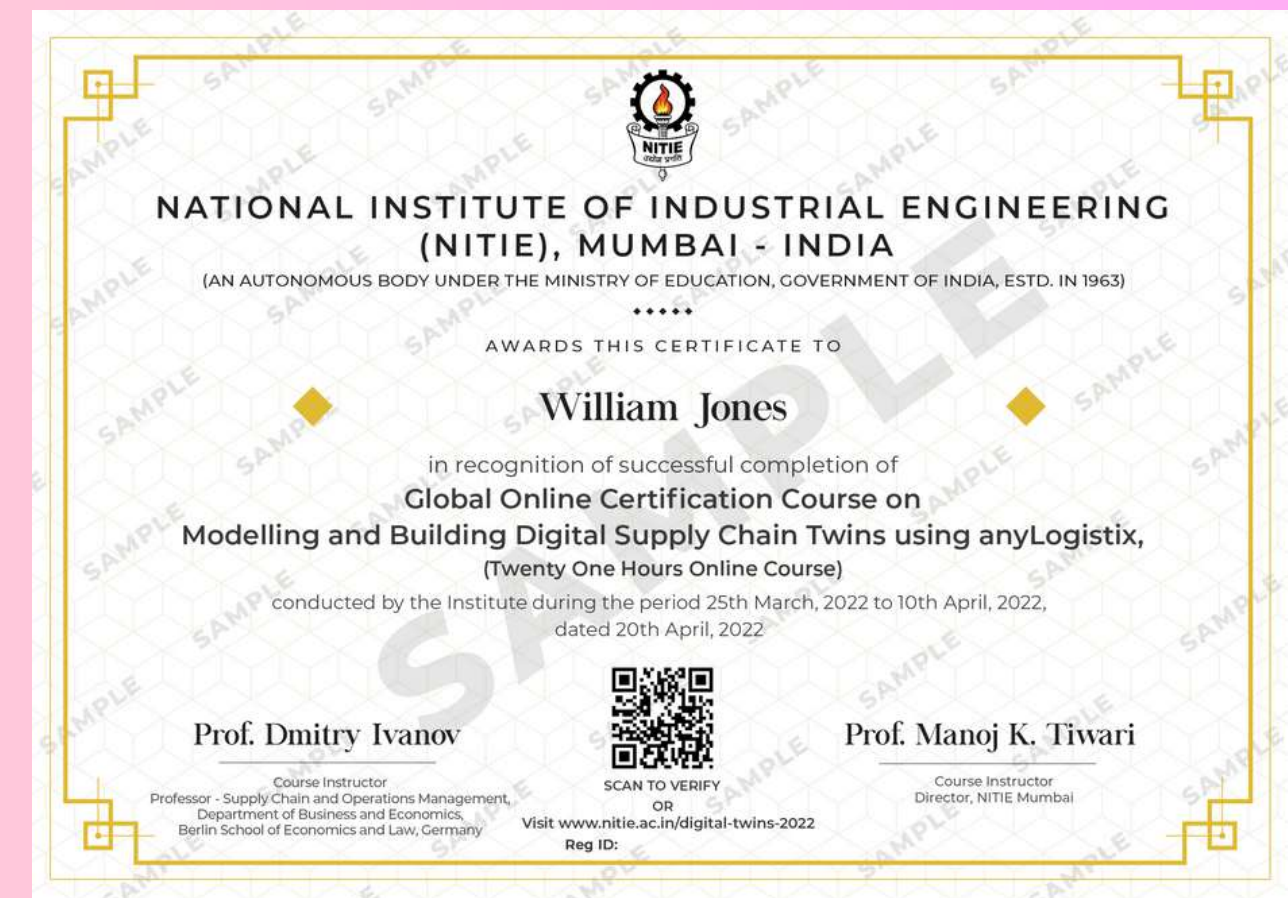


Course Focus

- Facility Location Planning
- Sourcing Policy
- Supply Chain Design
- Shipment Policy
- Inventory Control Policy
- Supply Chain Resilience

Course Outcome

- Perform analyses to determine an optimal location for a new warehouse.
- Compare alternative network designs using Network Optimization.
- Perform simulations of real time supply chain and operations management scenarios.
- Validate the models using Validation, Comparison experiments.
- Analyse supply chain behaviour under uncertainty and disruption.





Course Content

Lecture 1 - Introduction to Supply Chain Optimization and Simulation

- Supply Chain Network Optimization
- Supply Chain Simulation
- Digital Supply Chain Twins

Lecture 2 - Introduction to anyLogistix and Digital Supply Chain Twins

- Concepts and models used in anyLogistix
- Technical part of anyLogistix
- Practical, educational and research projects using anyLogistix
- anyLogistix as a Digital Supply Chain Twin

Lecture 3 - Supply chain network design using anyLogistix

- Greenfield Analysis
- Network Optimization

Lecture 4 - Supply chain simulation using anyLogistix

- Inventory and Transportation Control
- Supply Chain Performance Analysis

Lecture 5 - Supply chain resilience and its modelling

- Principles and concepts of resilience
- Modelling of Supply Chain Resilience

Lecture 6 - Supply chain resilience analysis using anyLogistix

- Principles and technical skills
- Examples of Resilience Simulations

Lecture 7 - Future trends

- Digital Supply Chain
- Industry 5.0



About NITIE



- National Institute of Industrial Engineering (NITIE), established in 1963 by the Government of India with the assistance of United Nations Development Project (UNDP) through the International Labour Organization (ILO), is one of the leading institutes for Management education.
- NITIE, a pioneer in Industrial Management has been positioned 7th amongst management schools in India by National Institutional Ranking Framework (NIRF) in 2023.
- NITIE, widely known as the leading Institute in Supply Chain and Operations, holds a purpose in advancing the transformative education and industry inspired research in different domains thus dedicating itself to help Indian businesses to make their presence felt globally. The institute has a strong linkage with private and public sectors, national research institute, other academic institutions, universities, government organizations, and communities.
- NITIE is dedicated to help Indian businesses to make their presence felt globally. NITIE has decided to act as driving force not only in manufacturing sector but all dynamic sectors of the Indian economy. It has aligned its vision and activities in line with the current and future needs of the Indian economy and its vibrant and growing sectors.



About Prof. Dmitry Ivanov

- Prof. Dmitry Ivanov is a professor of Supply Chain and Operations Management at the Berlin School of Economics and Law (HWR Berlin) and faculty director of M.A. Global Supply Chain and Operations Management program at HWR Berlin.
- His research explores structural dynamics and control in complex networks, with applications to supply chain resilience, scheduling in Industry 4.0 systems, supply chain simulation, risk analytics and digital supply chain twins.
- He has authored leading textbooks such as “Global Supply Chain and Operations Management”, “Introduction to Supply Chain Resilience”, and several research books such as “Digital Supply Chain”, “Supply Networks Dynamics and Control”, “Structural Dynamics and Resilience in Supply Chain Risk Management”, “Scheduling in Industry 4.0 and Cloud Manufacturing”, and “Handbook of Ripple Effects in the Supply Chain”.
- He is a recipient of the IISE Transactions Best Paper Award 2021, Best Paper and Most Cited Paper Awards of the International Journal of Production Research (2018, 2019, 2020, 2021), OMEGA Best Paper Award 2022, Annual Reviewer Award of the International Journal of Production Economics (2020), Clarivate Highly Cited Researcher Award (2021, 2022). He is listed in the German WiWo ranking 2018, 2020, and 2022 as “The Best Researchers in Business and Management” in categories TOP 50 (ranked #5 in 2022).

Profile Website -: <https://blog.hwr-berlin.de/ivanov/>



Prof. Dmitry Ivanov

Professor of Supply Chain and Operations Management & Faculty Director of M.A. Global Supply Chain and Operations Management Program, Berlin School of Economics and Law, Germany



About Prof. Manoj Kumar Tiwari



- Prof. Manoj K Tiwari, Director-NITIE, is on-lien from his post as Professor, Department of Industrial and Systems Engineering at the Indian Institute of Technology, Kharagpur.
- He is ranked #1 among top 100 researchers in International Journal of Production Research (1985-2010), a leading author for Supply Chain Analytical Techniques, Top 20 in Production and Operations Management (Int. Journal of Production Economics, 2009), and rated 2nd among Indian researchers in Logistics and Supply Chain Management (Analysis of the logistics Research in India-White paper, TU Dortmund University, 2012).
- He is the recipient of “Most Influential Researcher Award” in the domain of Operations and Supply Chain Management.
- He was recently awarded the David F. Baker Distinguished Research Award from the Institute of Industrial & Systems Engineers (IISE,USA)
- Optimization, Simulation and Computational Intelligence are the main techniques adopted by Prof. Tiwari to automate the decision support system for complex and large-scale problems in Manufacturing and Logistics System.
- Profile Website - [Prof. Manoj Kumar Tiwari](#)
- LinkedIn Profile - <https://www.linkedin.com/in/manoj-tiwari-5050a634/>



Prof. Manoj K. Tiwari

Director
National Institute of Industrial
Engineering (NITIE), Mumbai, India





Course Fees

Course fees for individual registration

Category	Fee Category	Course fee	GST (18%)	Total Fee (incl. of taxes)*
Participants from India	Students	₹ 1,500	₹ 270	₹ 1,770 (Register here)
	Academician / Faculty	₹ 3,000	₹ 540	₹ 3,540 (Register here)
	NITIE Alumni	₹ 3,000	₹ 540	₹ 3,540 (Register here)
	Industry Professionals / Others	₹ 5,000	₹ 900	₹ 5,900 (Register here)
Foreign Participants	Any	125 USD (Incl. of all)** (Register here)		

Course fees for bulk registration

Students			
Slabs	Course fee	GST (18%)	Total Fee (inclusive of taxes)*
Slab 1 (21-50)	₹ 1,200	₹ 216	₹ 1,416
Slab 2 (51 & above)	₹ 1,000	₹ 180	₹ 1,180

Industry Professionals			
Slabs	Course fee	GST (18%)	Total Fee (inclusive of taxes)*
Base Price (5-10)	₹ 5,000	₹ 900	₹ 5,900
Slab 1 (11 & above)	₹ 4,000	₹ 720	₹ 4,720

Success of Previous Courses

NITIE has successfully completed Global Online Certification Courses on Digital SCM Transformation 2021, Supply Chain Transformation through Digitization 2021 and Modelling and Building Digital Supply Chain Twins using anyLogistix 2022. All the courses have received an overwhelming response from reputed national and international organisations.



Some prominent academic institutions include the IITs, IIMs, IIFT, University of London, University of Warwick, and some eminent organisations include P&G, HUL, GE, ITC, Amul, Deloitte, Micron, Mondelez, Cipla, John Deere and many more.

Digital SCM 2021

SCM Transformation 2021

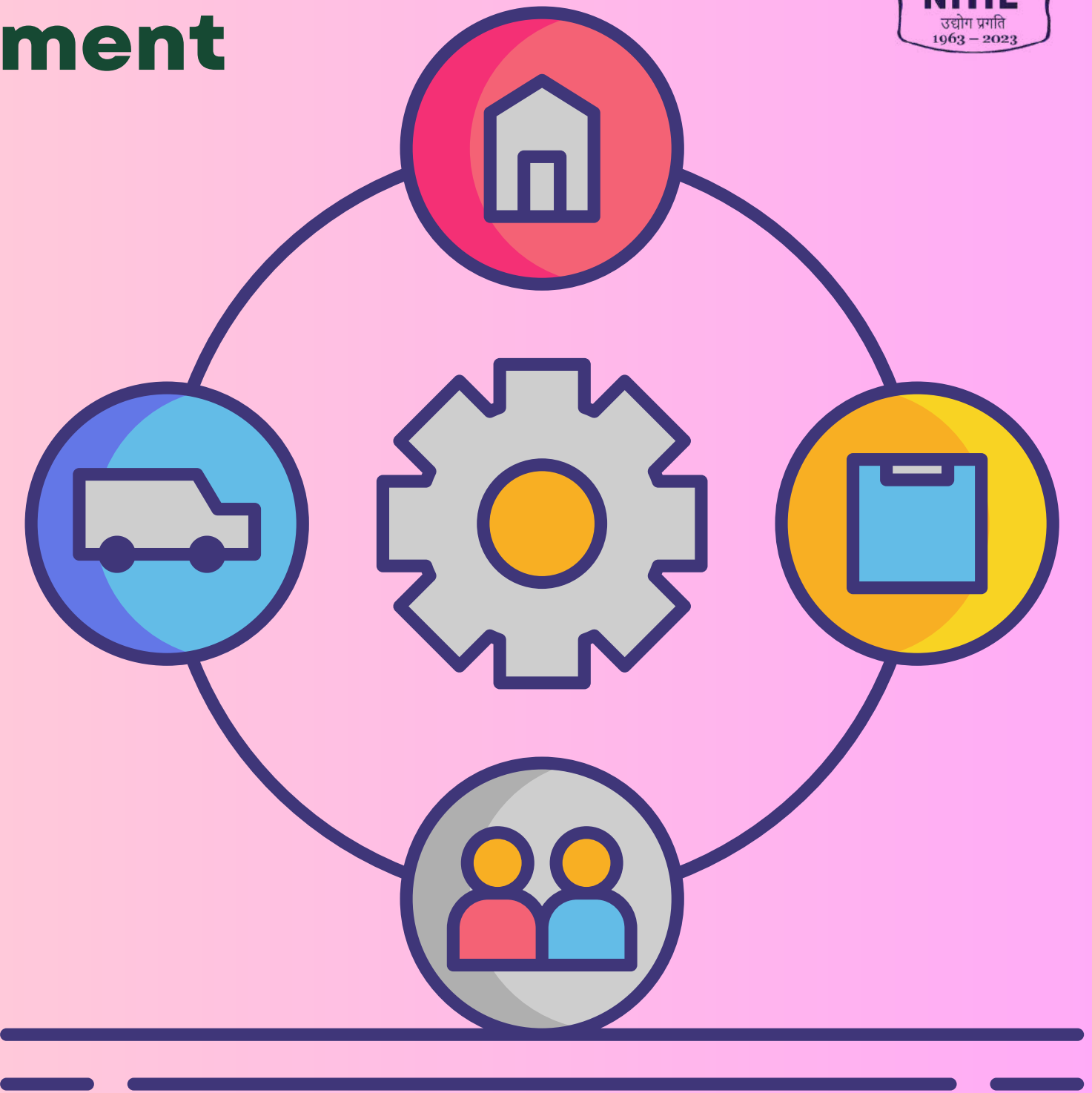
Digital SC Twin 2022





About NITIE's Centre of Excellence in Logistics and Supply Chain Management

- Shri Piyush Goyal inaugurated the Centre of Excellence in Logistics and Supply Chain Management at NITIE, Mumbai on 23rd September 2021.
- This center acts as a driving force to train and launch top quality programs to disseminate advanced knowledge and promote Digitization, Analytics, and IoT Application and Decision Support Systems through Artificial Intelligence and Machine Learning applications and Digital Twin and Control towers, to strengthen the monitoring and analysis of complex logistics operations.
- It helps the logistics sector become more cost-effective, make the sector more competitive, create new jobs, export more, engage better with the world markets, expand outreach and bring more economic activity to India.





Coordinating Team

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Prof. Veepan Kumar

Student Coordinators:

➤ Ms. Ishika Rajvanshi

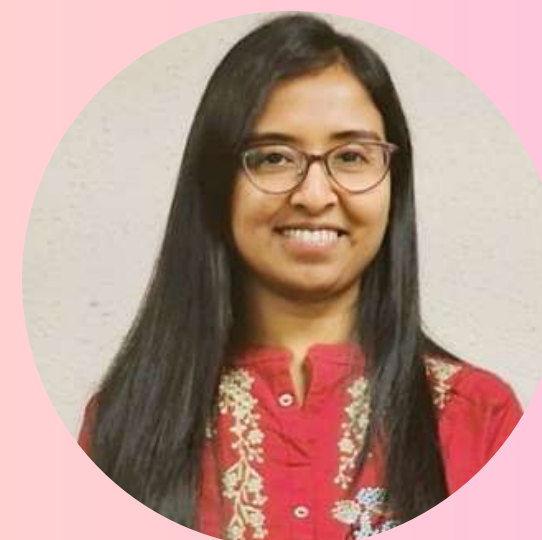
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➤ Mr. Akash Bhatia



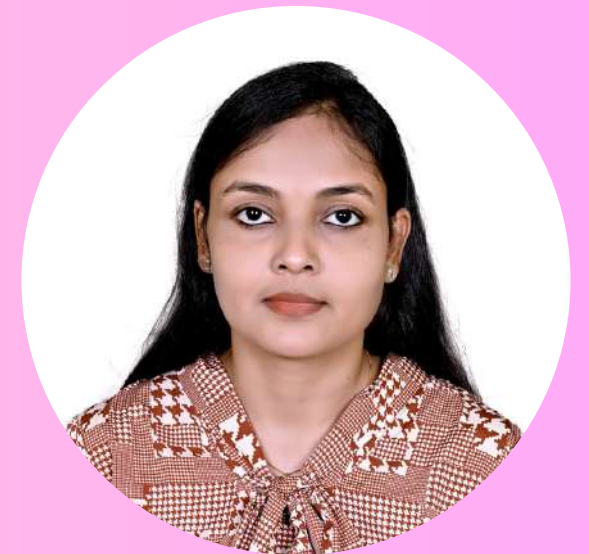
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[Register Here](#)