Vishlesan i-Hub
Indian Institute of Technology, Patna

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Learn in Hinglish

CERTIFICATE PROGRAM IN

DATA ANALYTICS AND GENERATIVE AI

FROM VISHLESAN I-HUB, IIT PATNA

About IIT Patna, Vishlesan i-Hub

National Innovation Hub: Vishlesan i-Hub at IIT Patna is part of a national mission, advancing AI in speech, video, and text analytics for sectors like health, education, and security.

Premier Technical Institute: IIT Patna is one of India's top engineering institutes, known for its cutting-edge research and strong academic foundation.

Strong Industry & Research Ecosystem: With active collaborations, incubators, and innovation hubs, IIT Patna bridges academia and industry to drive real-world impact.

Program Overview

The Data Analytics and Generative AI Program is designed for individuals aspiring to grow a high-impact career in Data Analytics and AI. Through structured coursework and hands-on projects, students will build a solid understanding of data analysis and Generative AI (GenAI) techniques, starting from analytics foundations and basic programming, progressing through SQL, Tableau, and Python, and culminating in GenAI-powered analytics workflows. By the end of the program, participants will be able to confidently implement data-driven solutions, interpret results, and address real-world business problems across various domains.

Why Choose This Course?

- **Prestigious Certification*:** Receive a recognized certification from Vishlesan i-Hub, IIT Patna, significantly enhancing your profile's value.
- **Industry-Focused Capstone Projects:** Work on real-world capstone projects designed to solve practical business challenges.
- **Career Support & Placement Assistance*:** Get placement assistance, resume reviews, and interview coaching.
- **Expert-Led Learning in English & Hindi:** Taught in English and Hindi by expert faculty and industry mentors who simplify complex ideas with local context.

***Eligibility : Placement requires 7+ CGPA and 65% attendance. Certificate requires 65% attendance and 30% marks in cumulative evaluations score.*

What Will You Learn?

This program covers the foundations of analytics, including data cleaning and analysis using spreadsheets, SQL for querying data, and Tableau for dashboard creation and storytelling. Learners will also explore GenAI basics and its application in analytics workflows, along with basic Python and pandas for simple data preparation and transformation. The course concludes with a mini-project showcasing an end-to-end analytics workflow and insight communication.

Toolkit

Google Sheets tableau SQL

Course Summary

Course Duration	Weekly Commitment	Certification
4 months	8–10 hours per week	From Vishlesan i-Hub, IIT Patna

Course Syllabus

Module 1
Analytics Foundations + GenAI Basics + Spreadsheets

- Explain the end-to-end analytics workflow from problem framing to insight communication
- Identify appropriate metrics and KPIs for common business questions
- Apply GenAI basics that will be used throughout the program, including core prompting patterns, structured outputs, and validation practices
- Clean, structure, and validate datasets using spreadsheets
- Use spreadsheet formulas and pivot tables to perform descriptive analysis

Module 2
SQL for Data Analysis

- Write SQL queries to filter, sort, and summarize data for analysis tasks
- Use joins to combine data from multiple tables for reporting and insights
- Apply aggregations and grouping to compute KPIs and business metrics
- Use subqueries and CTEs to structure readable analysis queries
- Use GenAI to draft SQL and then verify correctness through logical checks and result validation

Module 3
Tableau Dashboards + Storytelling

- Build core visualizations in Tableau appropriate for business analysis
- Create dashboards that communicate KPIs, trends, and comparisons clearly
- Apply basic dashboard design principles for readability and decision support
- Interpret dashboard outputs to generate actionable insights
- Use GenAI to draft insight narratives and executive summaries aligned to dashboards with human review

Module 4
GenAI for Analytics Workflows + Basic Python

- Apply practical prompting patterns for analytics tasks such as summarisation, extraction, comparison, and structured reporting
- Design multi-step GenAI-supported workflows for analysis, reporting, and decision support with appropriate validation steps
- Use Basic Python and Pandas to perform data loading, basic cleaning, and simple transformations
- Integrate Excel/Sheets, SQL, and Tableau outputs into a coherent analysis workflow
- Demonstrate an end-to-end analytics workflow with GenAI-supported documentation and insight communication

GenAI + Analytics Mini-Project

- Create a portfolio-ready submission showcasing one or more skills learned in the program, such as spreadsheet analysis, SQL insights, Tableau dashboarding, Basic Python data prep, or GenAI-supported reporting
- Use GenAI to plan analysis steps, draft queries or summaries, and improve communication, while validating outputs against data

English & Soft Skills Training

Everyday English for Self-Expression

Learn how to talk about yourself comfortably and confidently in common situations.

Building Clear and Correct Sentences

Strengthen sentence formation so your English sounds natural and complete.

Speaking with Impact and Awareness

Learn to organise thoughts, speak smoothly, and communicate with confidence.

Professional Communication & Soft Skills

Apply spoken English skills to professional and workplace-like situations.

Meet our Instructor Team

Balaji Sundararaman

Data Science & AI – Mentor & Trainer

25+ years of experience in Data Science, ML, and AI. Mentors aspiring data scientists and teaches core fundamentals across e-commerce and fintech domains.

Sankalp Sidhant

Lead Business Analyst – Gen AI Programs, Scale AI

Leads Gen AI Programs at Scale AI with expertise in generative AI and ML. Focused on aligning educational technologies with industry needs and driving learner engagement.

Admission Process

Clear Qualifier Test
Clear the qualifier test to be eligible for the program.

Complete Counselling
Only shortlisted candidates go through the counselling process.

Start Learning
Learn from India's top educators and stand out from the crowd.

Fees Structure

Qualifier Test Fee (Non-Refundable)	₹49

	Option 1	Option 2
	Upfront	**EMI** (Through our NBFC partners)
Secure Seat Fee (Non-Refundable)	₹2,499	₹2,499
Programme Fee (Non-Refundable)	₹23,500	₹8,303 x 3 months
Total	₹25,999*	₹27,408*

**GST at 18% extra, as applicable*

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