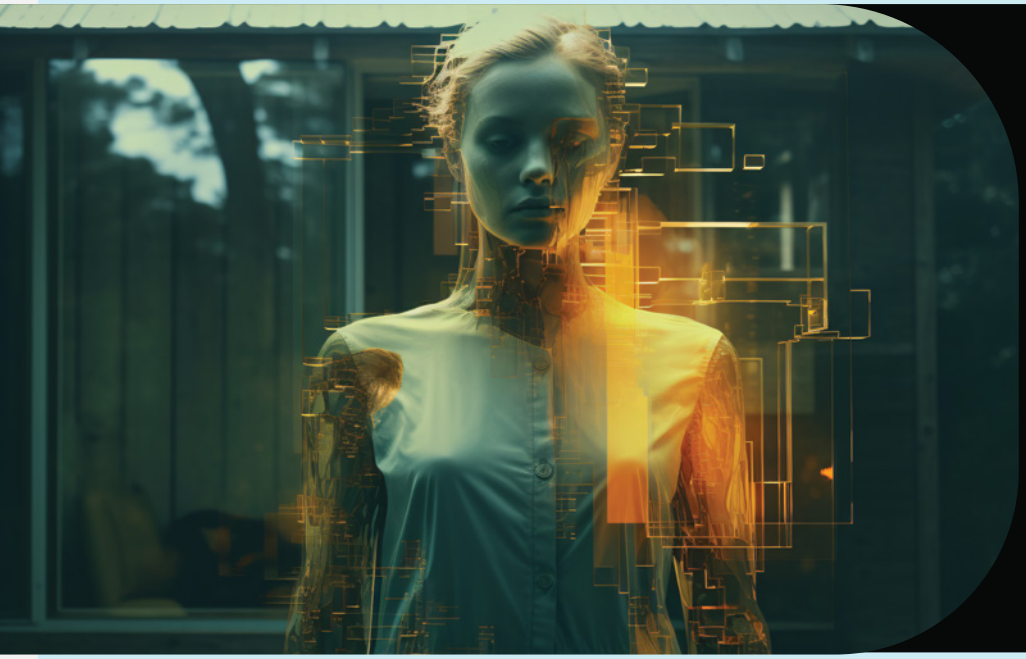
IDEAS-ISI

Indian Statistical Institute

prediQt.ai academy

AI Driven Application Development Using LLMs



25% Theory &
75% Practical

S.K.I.L.L.
Learning
Framework

Hybrid | 6 Months

UNLOCK YOUR FUTURE WITH GENERATIVE AI
THE NEXT FRONTIER OF INNOVATION

5x Growth

in the next 7 years

Source: Forbes

2x Salary

as compared to software developers

Source: Glassdoor

₹10 Lakhs

average Base Salary per annum

Source: Glassdoor

70%

Generation Z uses Gen AI

Source: Salesforce

BY COMPLETING THIS COURSE, YOU'LL GAIN THE SKILLS TO UNLOCK THESE INCREDIBLE BENEFITS

LEARN FROM THE EXPERTS

IDEAS-ISI | Indian Statistical Institute

IDEAS-ISI

Indian Statistical Institute

- **Globally Renowned:** IDEAS-Institute of Data Engineering, Analytics and Science Foundation is hosted by Indian Statistical Institute (ISI), an institute of eminence.
- **AI Innovation:** ISI's Centre for AI and Machine Learning (CAIML) drives cutting-edge AI research along with major developments in NLP including the Bhashini project.
- **Industry Solutions:** IDEAS-ISI is working on AI driven solutions in areas of agriculture, healthcare, language processing and others.
- **AI Expertise:** Specializes in AI systems for language understanding, medical image analysis, and computational forensics.
- **Future AI Leaders:** Known for training future AI leaders and contributing to theoretical and practical AI advancements.

PrediQt Academy

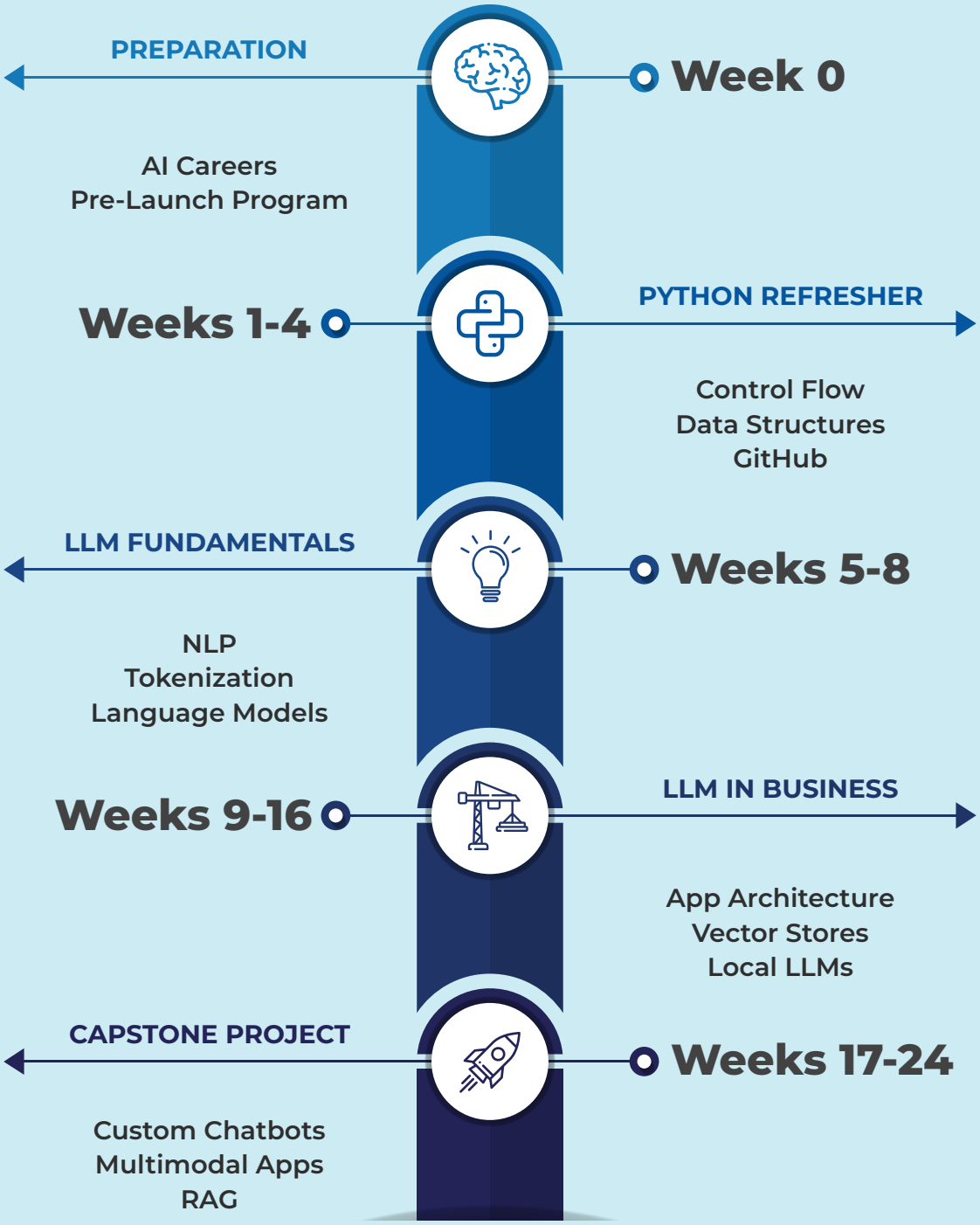
prediQt.ai academy

- **AI-Focused Institution:** Leading academy delivering innovative AI solutions across finance, healthcare, and retail.
- **Bridging Academia & Industry:** Equipping students with the practical skills and knowledge for AI excellence.
- **Smart AI Systems:** Helping organizations create smarter, seamless customer experiences with AI.
- **Expertise in AI:** Specializes in reinforcement learning, deep learning, and real-time AI applications.
- **Business Optimization:** Developing scalable AI systems to optimize business processes and improve customer engagement.
- **Open-Source & Proprietary Models:** Leveraging both open-source and custom models for AI-driven solutions.

"Facilitating the Integration of Industry and Academia"

COURSE STRUCTURE

COMPETITIVE ANALYSIS



COURSE STRUCTURE

COMPETITIVE EDGE

Features	PrediQt Academy	Others Courses
Course Duration	**6 Months** (Hybrid + Hands-on)	Shorter or Less Interactive Duration
Practical to Theory Ratio	**75% Practical, 25% Theory**	**50% Practical, 50% Theory**
Focus Area	**Generative AI (LLMs, NLP)**	General AI Concepts Only
Real-world Projects	**Yes** (LLM-based, Multimodal Applications)	Limited or No Real-world Projects
Mock Interviews	**3+ Sessions** (Mentor-Driven)	None or Limited
Mentorship	**Continuous Support** and **Project Reviews**	Limited Mentorship
Python & LLM Training	**Python Refresher + LLM Fundamentals**	Basic Python Only
Local LLM Deployment	**Covered** (GPT4All, Ollama, etc.)	**Not Covered**
Fee Structure	**Competitive** (With Scholarships)	Higher Fee without scholarships

UNLOCK YOUR AI POTENTIAL
WHO THIS COURSE EMPOWERS

WHO SHOULD ENROLL:
TAILORED FOR ASPIRING AI INNOVATORS

AI FOUNDATIONS FOR BEGINNERS

Start your AI journey from scratch.

ADVANCE YOUR DEVELOPER CAREER

Elevate your coding expertise for AI applications.

SEAMLESS TRANSITION TO AI

Pave your path to AI roles confidently.

ENHANCE YOUR AI MASTERY

Deepen your knowledge of LLMs and analytics.

KICKSTART YOUR AI JOURNEY

Suited for graduates and early coders.

TRANSFORMATIVE OUTCOMES:
WHAT YOU'LL ACHIEVE

PRACTICAL AI SKILLS

Gain hands-on experience through real-world AI

INDUSTRY-READY CAPABILITIES

Learn essential tools and methods valued by employers.

EXPLORE AI CAREER PATHS

Unlock new opportunities in top tech roles.

MASTER ADVANCED AI TECHNIQUES

Utilize state of the art AI tools shaping the industry.

OUR RELATIONSHIP

pwc

HIREVELOCITY

rezolve
instant salesware

KNR THERAPY
Great Place To Work. Certified

greenbrook medical

ujjivan
UJJIVAN SMALL FINANCE BANK
Build a Better Life

kotak
Kotak Mahindra Bank

Sharaf DG

snapmint

meritnation

Mirai
Automations

NICE

BLUE SOLAR
Residential & Commercial

GST
Suvidha Center

creativeintellects
A DIGITAL INNOVATION AGENCY

AUTO WARRANTY
FINDERS

QUICK FOREX
DELIVERED

KARKINOS

PROGRAM HIGHLIGHTS

LIVE

82

Hours of Interactive Sessions*

Instructor Led

60

Hours of Hands-on Lab @ PrediQt

Campus Immersion

3

Days @ Indian Statistical Institute, Kolkata

See Generative AI in Action

APPLY YOUR KNOWLEDGE IN LIVE PROJECTS

Build Application

USING LLM

Crack Job Interviews

WITH 3+ MOCK INTERVIEW SESSION

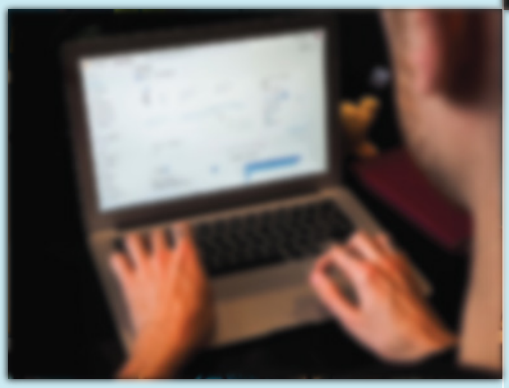
*Course Duration of 82 Hours Inclusive of Instructor led Hands-on Lab

YOU SHOULD DO THIS PROGRAM IF YOU ARE:

Pursuing your Graduation or Fresh out of it with coding knowledge

A Software Developer looking to earn more

Stuck in wrong field but have basic coding knowledge



AI or Analytics Professional hoping to get better

predict.ai academy

OUR **S.K.I.L.L** FRAMEWORK EMPHASIZES A CYCLE OF LEARNING, PRACTICAL APPLICATIONS AND REAL-TIME FEEDBACK TO ENSURE YOU ARE FUTURE READY

CURRICULUM & CALENDAR

Week 0: Preparation

STUDY

- Welcome to the Pre-Launch Program
- AI Careers
- User Research and Positioning

Week 1 - Week 4: Foundation

STUDY

Python Refresher

Introduction to Python, Basic Syntax and Operations, Control Flow, Functions and Modules, Data Structures

Setting Up Development Environment

Environment Setup, Configuration, Version Control

GitHub Fundamentals

Git Basics, Repository Management, Collaboration

KNOWLEDGE

- Write basic Python scripts
- Use control flow and functions
- Apply Python Data structures
- Set up a development environment
- Manage code with GitHub

IMPLEMENT

- Create advanced Python programs
- Collaborate using Git/Github
- Work with complex data structures
- Use Python modules and libraries
- Handle version control and branches

LEARN

- Assignment Review & Tests

LAUNCH

- Quizzes & Mock Interviews

Week 5 - Week 8: LLM Fundamentals

STUDY

NLP Basics

Introduction – language structure, syntax, semantics,
Techniques – tokenisation, parsing, NER, RE
Distribution Hypothesis and Embeddings
Language Models

LLM Basics

The LLM landscape – Models sizes, open source vs closed source
Using LLMs – Context, Prompting, Hallucination, Temperature
How LLMs are built – Datasets, Training, SFT, RHLF
LLM Usage – Chat, API, Local Deployment,
How LLMs work - Neural Networks, Transformers

KNOWLEDGE

- Understanding syntax, semantics and language structure
- Perform tokenisation and parsing
- Extract entities using NER and RE
- Apply word embeddings
- Use basic language models in tasks

IMPLEMENT

- Identify LLM models and their differences
- Use context and prompting with LLMs
- Understand LLM training processes
- Deploy LLMs for chat, API, or local use
- Know the basics of neural networks and transformers

LEARN

- Assignment Review & Tests

LAUNCH

- Quizzes & Mock Interviews

Week 9 - Week 16: LLMs in the Business Environment

STUDY

LLM Application Landscape

Architecture of LLM Based Applications – Frontend, Safety Filter, Backend, Embedding Model, Vector Store, LLM, Cache, Output Formatter

The LLM Ecosystem – Huggingface, Commercial Vendors, Open Source Players,

Choosing the Right LLM – Licensing, Model Size, Context Size, Modality

Running LLMs Locally – GPT4All, Ollama

App Development using LLM

Prompting – Templates, Techniques, Tools, Embedding Models – MTEB, Vector databases, RAG – Different Types, Using Agents, App Dev frameworks – LangChain, LlamaIndex, LangGraph, Using Vendor APIs – OpenAI, Anthropic, Cohere, Using open source LLMs – Llama3.2, Open AI, Snowflake, Developing Multimodal Apps, Testing LLM based Applications

Deploying LLM based Application

Challenges – Latency, Cost, Monitoring

LLM Serving Platforms – vLLM, Langserve

KNOWLEDGE

- Understand LLM app architecture
- Learn the LLM ecosystem
- Know how to choose LLMs
- Explore local LLMs (e.g., GTP4All)
- Study LLM app development

IMPLEMENT

- Develop LLM apps with frameworks
- Use embedding models and RAG
- Work with vendor APIs
- Build multimodal apps
- Handle deployment challenges

LEARN

- Assignment Review & Tests

LAUNCH

- Quizzes & Mock Interviews

Week 17 - Week 24: Capstone Project

STUDY

Live Project

LLMs in Business Environment & Application Development

KNOWLEDGE

- **Develop a Custom Chatbot with LLM API:**
  - Integrate LLM via API (OpenAI, Hugging Face)
  - Implement prompt techniques and safety filters
- **Create an LLM-Powered Summarizer:**
  - Use LLM for document summarization
  - Optimize with caching for performance
- **Test and Deploy LLM Applications:**
  - Set up testing, monitoring and deployment pipelines
  - Use platforms like vLLM for scalability and performance

IMPLEMENT

- **Build a RAG (Retrieval-Augmented Generation) Application:**
  - Combine LLM with a vector database for retrieval
  - Implement context-based query answering
- **Multimodal Application Development:**
  - Integrate text and image data using multimodal models
  - Generate outputs based on multimodal inputs

LEARN

- Mentor Driven Project Review

LAUNCH

- Quizzes & Mock Interviews

LEARN FROM THE VERY BEST

Diptendu Dutta

Head of Technology, IDEAS-ISI, Indian Statistical Institute

IDEAS-ISI

Experience in:
Computer Technologist with 30+ years in software development, architecture, NLP, and open-source projects, including two founded on GitHub.

- AUNWESHA — Owner
- Open Source Contributor
- University of Saskatchewan — Scholar

Dr. Malay Bhattacharyya

Associate Professor, Machine Intelligence Unit, Indian Statistical Institute, Kolkata

IDEAS-ISI

Experience in:
AI, Data Science, and Machine Learning with a focus on Computation for Social Good and Healthcare.

- Google — Impact Scholars Award
- DRDO — Co-Principal Investigator
- Visiting Researcher

Abhishek Nandy

Head of AI

predict.ai academy

Experience in:
Reinforcement Learning, Deep Learning, Unity ML, Intel Optimized Python, alongside a focus on touchless human interaction through Intel Perceptual Computing.

- intel — Black Belt Software Developer
- Meta — Financial Services Ideation Challenge Winner
- Microsoft — MVP Windows Platform Dev

LEARN FROM THE VERY BEST

Sauvik Banerjjee

Founder MD & CEO - Ziki, Yukio & Sirrus.ai
President Product & Tech @ Rezolve AI

rezolve instant salesware

Experience in:
Founding CTO in Tata Neu , Tata Digital , Global CTA in SAP, TEDx Speaker and Tech Futurist.

TATA DIGITAL	TATA NEU	SAP
Founding CTO	Founding CTO	Global CTA

Kalpadip Basu

Head of Innovation & COO
Technology Expert - BFSI

predict.ai academy

Experience in:
Generative AI, Computer Vision, and Predictive Analytics to create cutting-edge solutions. Has successfully designed and implemented AI-powered systems that enhance consumer interactions and streamline operations.

MetLife	kotak Kotak Mahindra Bank	ADITYA BIRLA GROUP
Agency Head	Deputy Chief Manager	Business Mentor Manager

OUR ADVANTAGE:
WE DON'T JUST UPSKILL YOU, WE EMPOWER YOUR PATH TO CAREER SUCCESS.

Instructors Led Hands on Lab

Live Projects

Guided Mentorships

Joint Initiative of Leading AI Institute and AI / ML Company

Resume Building

Interview Preparation

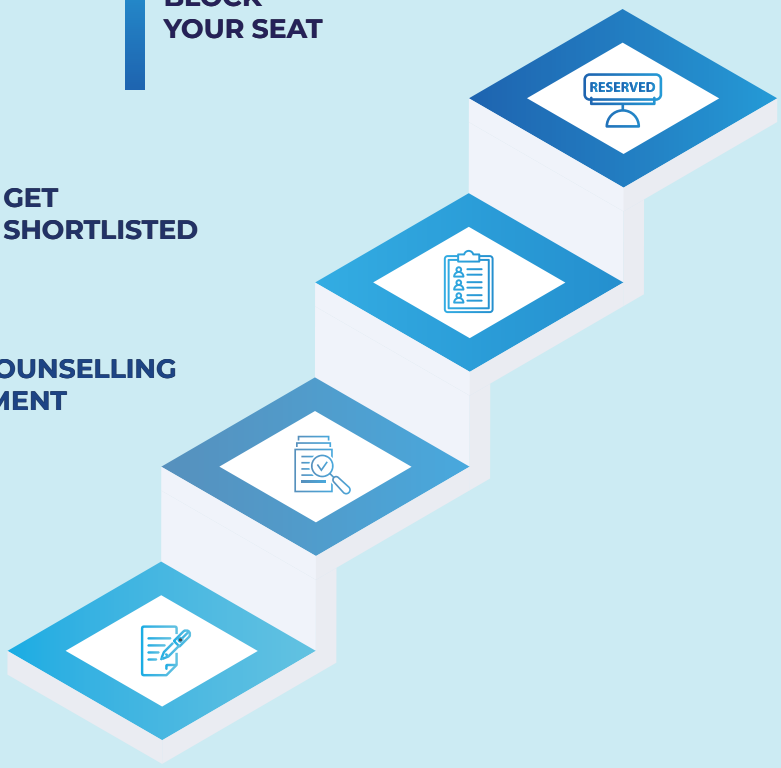
ENROL IN 4 SMALL STEPS, THEN TAKE A GIANT LEAP.

STEP 4 BLOCK YOUR SEAT

STEP 3 GET SHORTLISTED

STEP 2 CAREER COUNSELLING & ASSESSMENT

STEP 1 SUBMIT YOUR INTEREST



Eligibility: A passion for AI and the desire to learn • Basic Coding Knowledge • Computer & Internet Access

START EXPLORING

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+91 90739 07565

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connectus@prediqt.ai

Visit us at:
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www.prediqt.ai

IDEAS - Indian Statistical Institute, Kolkata

prediqt.ai academy

LET'S TALK