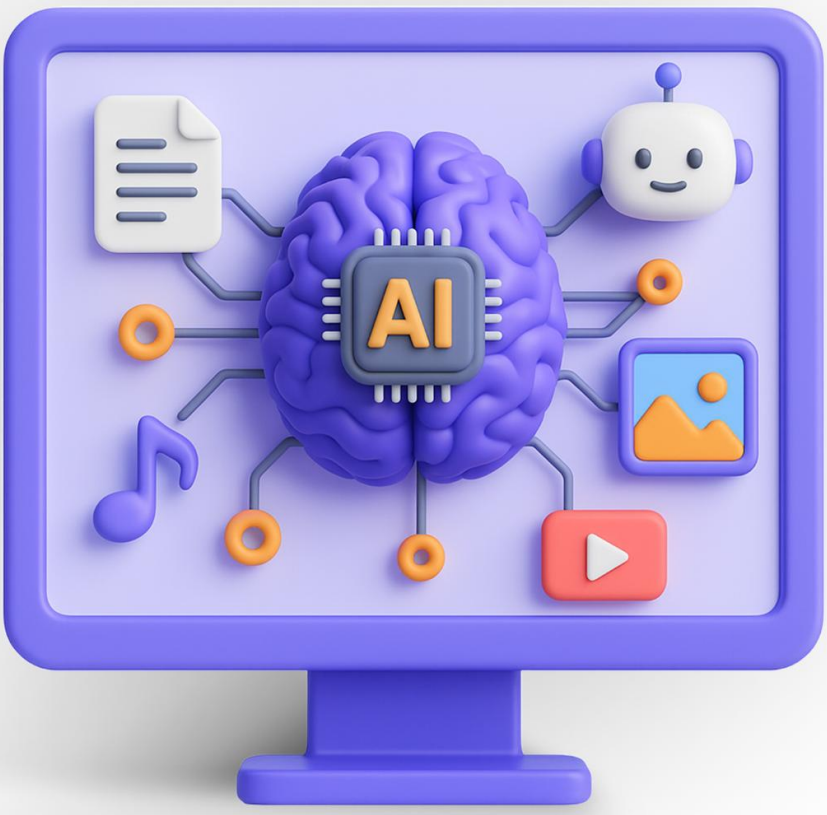
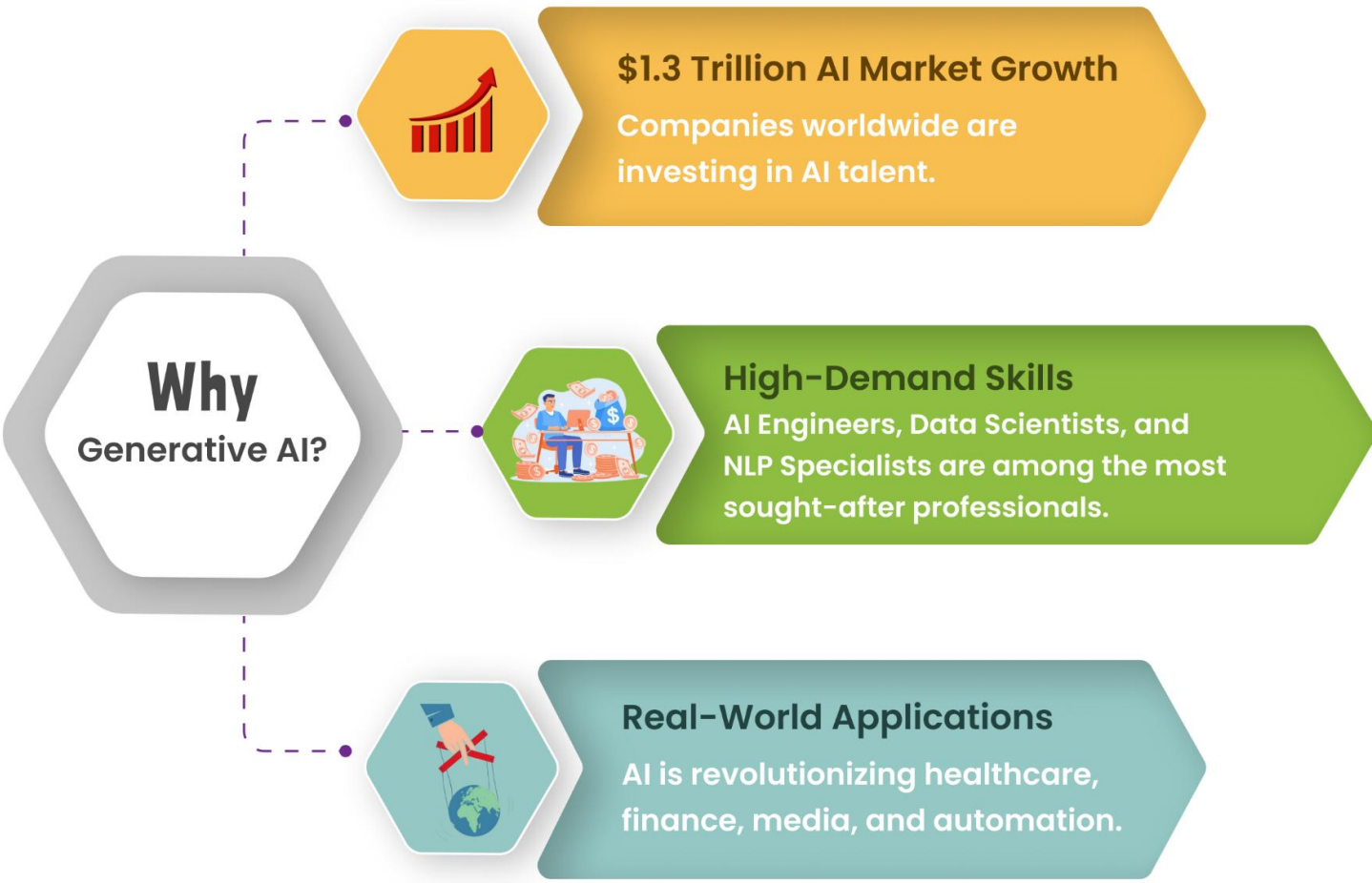
TeqCertify
Elevate Your Data Journey

GENERATIVE AI



Why Generative AI?

Artificial Intelligence is **reshaping industries,** driving automation, creativity, and **decision-making** like never before. Generative AI, in particular, is transforming how businesses approach content creation, **predictive modeling,** and automation.



Career Opportunities

Years of Experience

Journey With TeqCertify

Capstone Project
Designing & Building Intelligent AI Solutions

AI Model Deployment
Bringing AI from Concept to Reality

Prompt Engineering
Mastering AI Interaction & Optimization

Generative AI
Crafting Intelligent & Creative Systems

Deep Learning
Teaching Machines to Think & Create

Machine Learning
Understanding Patterns, Powering AI

Python for AI
From No-Code to Expert-Level Automation

Path to your Dream Job

Build a Standout Resume & Portfolio

01

Craft an ATS-friendly resume.
Highlight key skills & achievements.
Showcase your best projects & experience.

Master Interview Skills

02

Learn how to answer tricky questions.
Improve communication & confidence.
Practice with mock interviews.

Get Expert Feedback & Identify Gaps

03

Receive constructive feedback on interviews.
Understand areas that need improvement.
Make necessary revisions.

Improve & Upskill

04

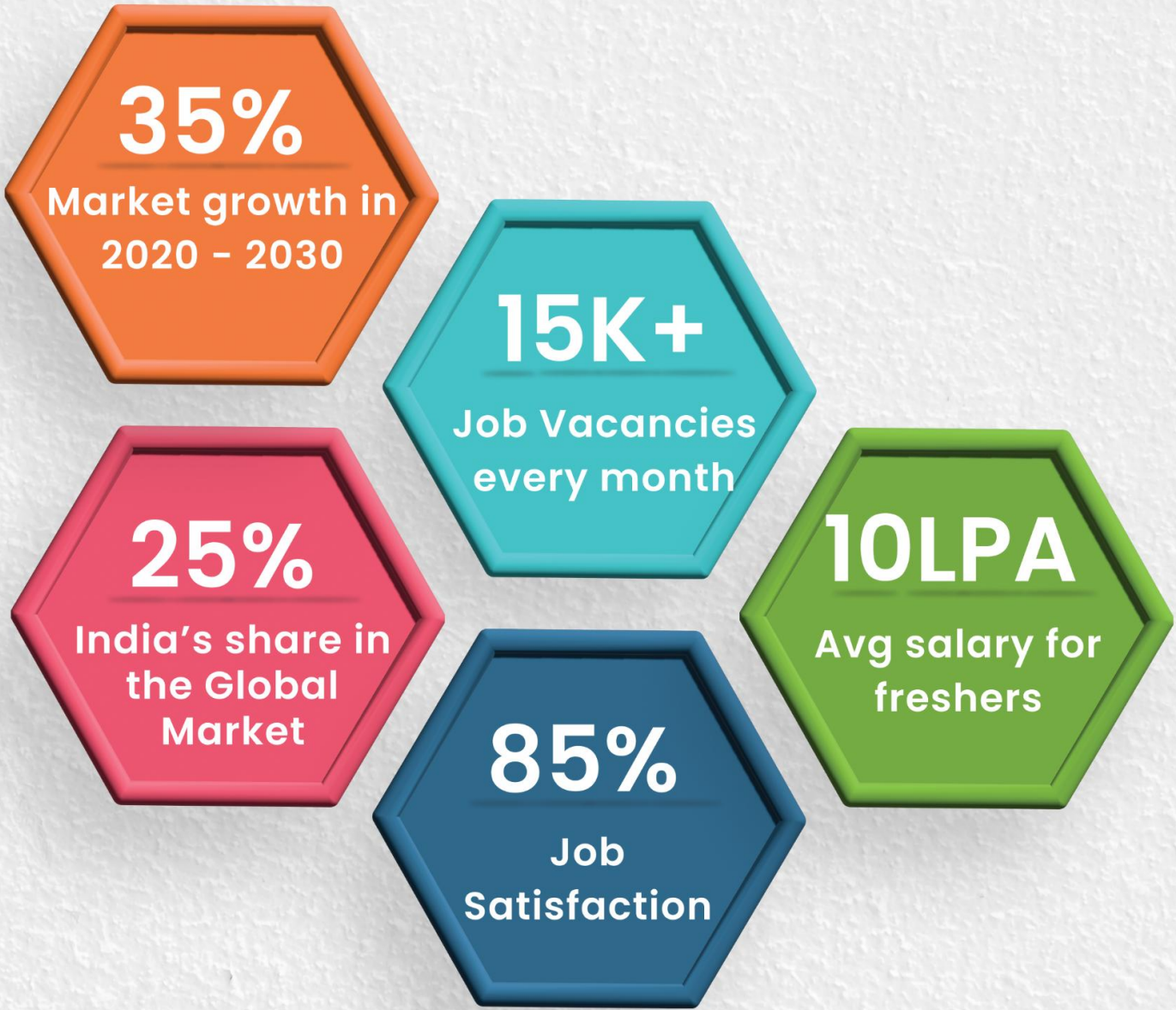
Gain new skills based on feedback.
Strengthen technical & problem-solving abilities.
Enhance communication & presentation skills.

Land Your Dream Job

05

Negotiate salary & job offers smartly.
Secure the right job that fits your goals.
Get mentorship for long-term career growth.

Why should you invest in the track?



Shape Tomorrow's World Today!

Imagine creating AI that writes like humans, generates art, or even codes software! Generative AI is revolutionising industries—from entertainment to healthcare—and you can be at the forefront. No PhD required—just passion and Python! Dive into LLMs, diffusion models, and neural networks to build the future, one algorithm at a time.

Syllabus Breakdown

Go from AI basics to building smart, creative AI applications! Learn how machines generate text, images, and even conversations.

01 **Python & SQL for AI**
Code with Python, manage data with SQL, and prep for AI.

02 **AI & Machine Learning**
Discover how AI learns, predicts, and automates tasks.

03 **Math for AI**
Unlock AI's secrets with statistics, probability, and linear algebra.

04 **Neural Networks & Deep Learning**
Build dashboards using Power BI, Tableau & Python.

05 **Large Language Models**
Explore ChatGPT, BERT & transformers that generate human-like text.

06 **Image & Text Generation**
Create AI art, write stories, and compose music.

07 **Cloud Deployment**
Scale AI with Google Cloud, AWS & real-world applications.

08 **AI-Powered Applications**
Build chatbots, automation tools & AI-driven solutions.

Track Curriculum

Phase 1: Python & SQL Fundamentals (21 Modules)

Python & SQL Fundamentals

Master the core tools that power Generative AI—Python for logic and automation, and SQL for handling structured data.

Unit 1: Python Programming for AI & Data Science

Learn Python syntax, control structures, functions, data structures, file handling, regular expressions, and OOP.

Unit 2: Data Handling & Manipulation with Python

Explore NumPy, Pandas, and Matplotlib for data manipulation, analysis, and visualization.

Unit 3: SQL & Databases for AI Applications

Master SQL queries, joins, aggregations, CTEs, window functions, and Python–SQL integration with SQLite & SQLAlchemy.

Track Curriculum

Phase 2: Introduction to Generative AI (8 Modules)

Introduction to Generative AI

Step into the world of machines that create. Understand how AI models learn, generate, and evolve.

Unit 4: Introduction to AI & Machine Learning

Get familiar with AI fundamentals, learning types, neural networks, and the basics of deep learning.

Unit 5: Mathematics & Statistics for AI

Build the mathematical foundation for AI with statistics, probability, linear algebra, and calculus.

Unit 6: Probability Theory & Random Variables

Understand how uncertainty is modeled using distributions and expected values.

Unit 7: Linear Algebra for AI

Vectors, matrices, and operations essential for deep learning models.

Unit 8: Calculus for Optimization

Derivatives, gradients, and how they help models learn.

Unit 9: Introduction to Neural Networks

Understand perceptrons, activation functions, and backpropagation.

Unit 10: AI Tools & Ecosystem Overview

Get hands-on with Jupyter, Colab, TensorFlow, and PyTorch.

Unit 11: Ethics, Bias & Limitations in Generative AI

Understand ethical considerations, bias in AI models, and responsible AI development.

Track Curriculum

Phase 3: Advanced Generative AI Techniques (9 Modules)

Advanced Generative AI Techniques

Discover how cutting-edge AI models generate human-like text, art, and more.

Unit 12: Deep Learning & Neural Networks

Dive into CNNs, RNNs, LSTMs, and Transformers—the engines behind AI creativity.

Unit 13: NLP & Text Generation

Explore natural language processing with tokenization, sentiment analysis, BERT, GPT, text generation.

Unit 14: Image Generation using GANs

Learn how Generative Adversarial Networks create images from scratch.

Unit 15: Prompt Engineering for Generative Models

Design and refine prompts to guide AI outputs effectively.

Unit 16: Transformers in Detail (BERT, GPT, T5)

Explore transformer architectures and pre-trained model fine-tuning.

Unit 17: Multimodal AI & Vision-Language Models

Combine text and images using models like CLIP, DALL·E, and BLIP.

Unit 18: Audio Generation & Speech Synthesis

Understand how AI converts text to speech & generates audio using models like Tacotron & WaveNet.

Unit 19: Fine-tuning Pretrained Models

Customize large models for specific business and industry tasks.

Unit 20: Evaluation Metrics for Generative Models

Learn how to measure quality, coherence, and usefulness of generated outputs.

Track Curriculum

Phase 4: Building & Deploying AI Applications (5 Modules)

Building & Deploying AI Applications

Bring your AI models to life by deploying them into real-world applications.

Unit 21: Model Deployment & AI Applications

Learn how to use Flask, FastAPI, and Streamlit to deploy models and integrate them with APIs.

Unit 22: Building AI-Powered Web Apps

Build interactive AI apps that users can test online.

Unit 23: Using LangChain & Vector Databases

Enable memory and context in LLM apps using tools like LangChain, Pinecone, and FAISS.

Unit 24: Real-Time Inference & Optimization

Optimize models for faster responses using ONNX and quantization.

Unit 25: Scaling AI Apps on the Cloud

Deploy models on AWS, Azure, or GCP for production-level availability.

Sample Projects

AI-based Resume Enhancer

A Gen AI model that rewrites candidate resumes using job-specific prompts, improving shortlisting rates.

Chatbot for Customer Support

Developed a conversational agent using LLMs to handle FAQs, policy info, and grievance redressal, reducing support load.

Automated Slide Generation from Research Docs

Built a Gen AI tool that converts dense research papers into clean, summarized slides with bullet points and diagrams.

Personalized Learning Tutor & Interview Coach

An interactive AI avatar that conducts ranked mock interviews, analyzes responses, and gives feedback with follow-up practice.

Few of our hiring partners

Student Testimonials

Vinoth Kumar

Data Engineer

J.P.Morgan

Valli Raja Sekar

Sr. Data Scientist

TATA CONSULTANCY SERVICES

Rajashekaran

Sr. Data Analyst

accenture

Your Name

Your Role

You can be here

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