

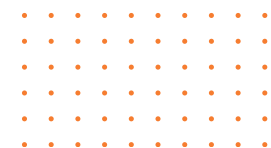


Tech Learniversity



JOB GUARANTEED PROGRAM

QUALITY EDUCATION FROM QUALITY PEOPLE



PROGRAM NAME

FULL STACK PYTHON DEVELOPER PROGRAM

QUALITY EDUCATION FROM QUALITY PEOPLE





PROGRAM OVERVIEW

The Full Stack Python Developer Program by Tech Learniversity is designed to equip learners with the skills necessary to excel in both frontend and backend development using Python. This comprehensive program covers essential technologies, frameworks, and best practices, ensuring you become proficient in building robust web applications.

Duration

140 Hours



SYLLABUS

MODULE 1. INTRODUCTION TO PROGRAMMING & PYTHON BASICS

- Introduction to Programming & Software Development
- Introduction to Python
- Understanding Full-Stack Development
- Setting Up Development Environment (Python, VS Code, Jupyter Notebook)
- Python Syntax, Variables, and Data Types
- Operators and Expressions
- Control Flow Statements (if-else, loops)
- Functions and Modules
- Object-Oriented Programming (Classes, Objects, Inheritance, Polymorphism)
- Exception Handling
- File Handling (Reading/Writing Files, CSV, JSON)



SYLLABUS

MODULE 2. ADVANCED PYTHON & DATABASE MANAGEMENT

- Working with Built-in Data Structures (Lists, Tuples, Dictionaries, Sets)
- Regular Expressions in Python
- Multithreading & Multiprocessing
- Introduction to Databases (SQL & NoSQL)
- Relational Databases (MySQL, PostgreSQL)
- SQL Queries (CRUD Operations, Joins, Subqueries, Indexing)
- NoSQL Databases (MongoDB, Firebase)
- Object-Relational Mapping (ORM) using SQLAlchemy/Django ORM
- Database Migrations
- Performance Optimization for Databases



SYLLABUS

MODULE 3. BACKEND DEVELOPMENT WITH FLASK & DJANGO

Flask (Lightweight Framework)

- Introduction to Flask
- Setting up Flask Environment
- Routing & URL Mapping
- Request Handling (GET, POST, PUT, DELETE)
- Flask Templating with Jinja2
- Flask with SQLAlchemy (Database Integration)
- Authentication & Authorization (JWT, OAuth)
- REST API Development with Flask

A person in a dark blue suit and a striped tie is pointing their right hand towards a laptop screen. The laptop screen displays various business charts, including a bar chart and a pie chart. On the desk in front of the laptop, there are several printed documents with charts and a yellow sticky note. The background is a plain, light-colored wall.

SYLLABUS

MODULE 3. BACKEND DEVELOPMENT WITH FLASK & DJANGO

Django (Full-Featured Framework)

- Introduction to Django & MVT Architecture
- Setting Up a Django Project
- Django Models & ORM
- Creating Views & Templates
- Django Forms & Validations
- Django Authentication & Middleware
- REST API Development with Django REST Framework (DRF)
- Deployment of Flask/Django Applications



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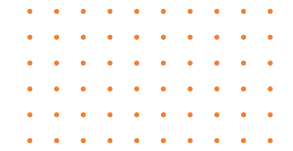
MODULE 4. FRONTEND DEVELOPMENT (HTML, CSS, JAVASCRIPT)

- HTML5 – Semantic Elements, Forms, Tables, Multimedia
- CSS3 – Box Model, Flexbox, Grid, Animations
- JavaScript Basics – ES6+ Features (Arrow Functions, Async/Await, Promises)
- DOM Manipulation
- Event Handling & Forms
- JavaScript Fetch API & HTTP Requests
- Responsive Design (Bootstrap, Tailwind CSS)



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MODULE 5. FRONTEND DEVELOPMENT WITH REACT.JS



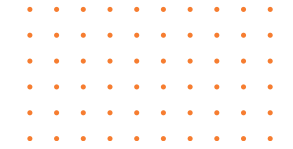
- Introduction to React.js & Component-Based Architecture
- JSX & Virtual DOM
- Functional vs Class Components
- Props & State Management
- React Hooks (useState, useEffect, useContext)
- Handling Forms in React
- API Integration with Axios/Fetch
- React Router for Navigation
- State Management with Redux Toolkit
- Authentication & Authorization in React
- UI Libraries (Material UI, Tailwind CSS)



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MODULE 6. FULL-STACK INTEGRATION (CONNECTING BACKEND & FRONTEND)

- REST API Consumption in React.js
- Authentication Flow (Login, Registration, JWT)
- Handling CORS Issues
- File Uploads & Handling
- Role-Based Access Control
- WebSockets for Real-time Communication





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MODULE 7. DEVOPS, DEPLOYMENT & CLOUD COMPUTING

- Introduction to DevOps & Cloud Computing
- Version Control with Git & GitHub
- CI/CD Pipelines (GitHub Actions, Jenkins)
- Docker & Containerization
- Kubernetes for Orchestration
- Deployment on Cloud Platforms (AWS, Heroku, DigitalOcean)
- Nginx & Gunicorn for Production Deployment
- Serverless Deployment (AWS Lambda, Firebase Functions)



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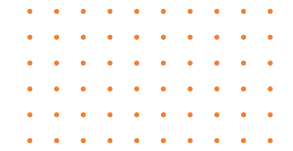
MODULE 8. ADVANCED TOPICS & REAL-WORLD APPLICATIONS

- Web Scraping with BeautifulSoup & Scrapy
- Caching Strategies (Redis, Memcached)
- Message Queues (Celery, RabbitMQ)
- Performance Optimization & Security Best Practices
- GraphQL vs REST API
- Machine Learning Integration with Flask/Django (Optional)
- Real-time Features with WebSockets



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MODULE 9: FINAL PROJECTS & CAPSTONE



- Project 1 – E-commerce Website (Product Listing, Cart, Checkout, Payment)
- Project 2 – Social Media App (User Profiles, Posts, Likes, Comments)
- Project 3 – Real-time Chat App (WebSockets, Authentication, Notifications)
- Project 4 – Job Portal (Employer & Candidate Dashboard, Search, Apply)
- Project 5 – Portfolio Website with Blog & Admin Panel



WELCOME TO OUR EDTECH FIRM

Choose Tech Learniversity for quality education from industry experts committed to empowering your success. Embark on a transformative educational journey with Tech Learniversity and unlock your potential for a brighter future. Together, we can create meaningful experiences that inspire growth, collaboration, and success!

Company Description

At Tech Learniversity, we are dedicated to transforming lives through accessible, cutting-edge technology education and personalized learning experiences that empower individuals to excel in the digital era.

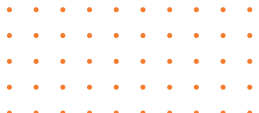


ABOUT US

Company Description

Tech Learniversity is a cutting-edge EdTech firm dedicated to revolutionizing global education through personalized learning experiences. We offer innovative training programs, including immersive bootcamps and next-generation AI courses, designed to equip learners with the skills needed to excel in today's competitive job market.

[More Information](#)



OUR HISTORY

2021-2022

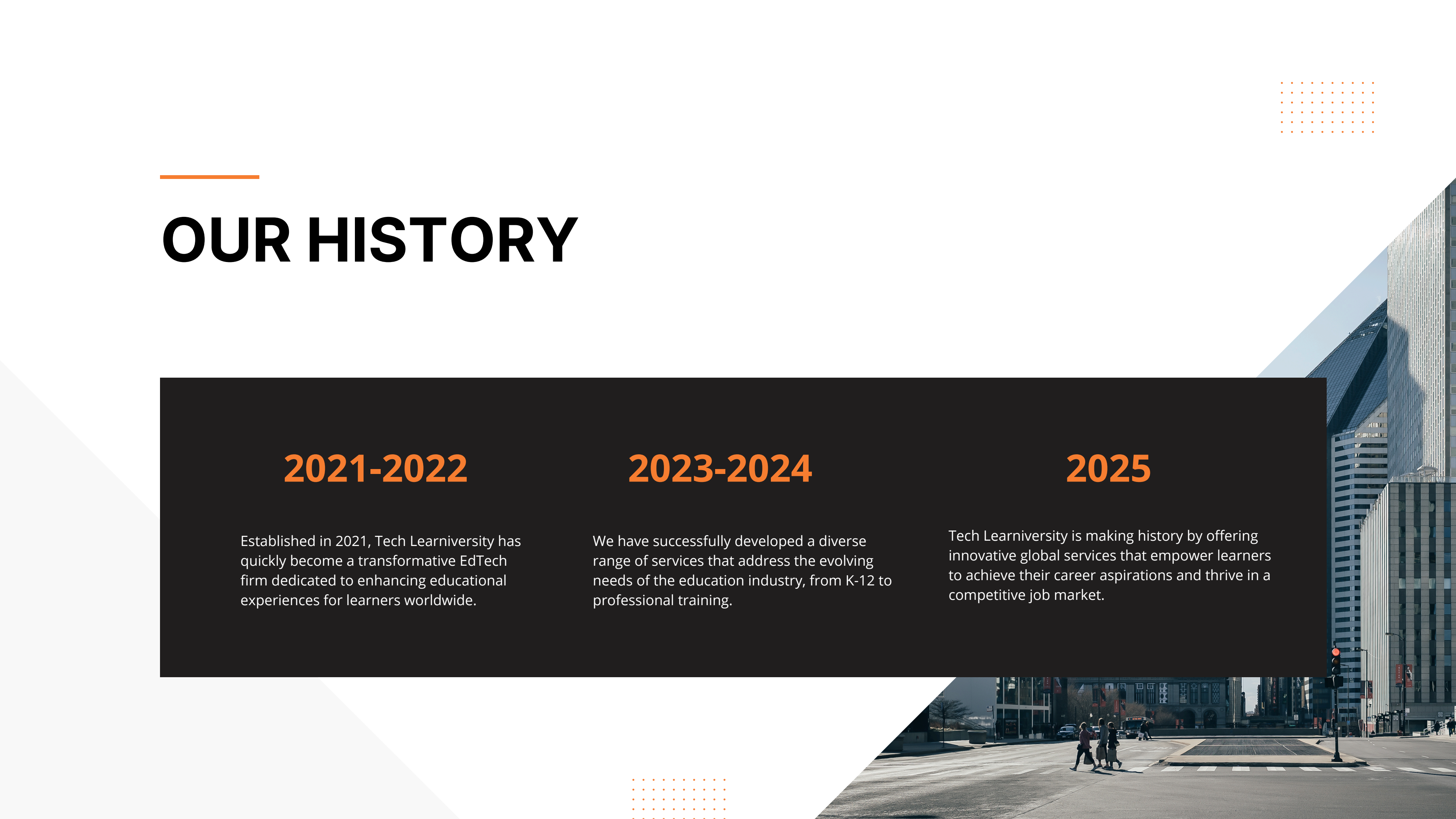
Established in 2021, Tech Learniversity has quickly become a transformative EdTech firm dedicated to enhancing educational experiences for learners worldwide.

2023-2024

We have successfully developed a diverse range of services that address the evolving needs of the education industry, from K-12 to professional training.

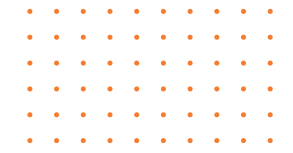
2025

Tech Learniversity is making history by offering innovative global services that empower learners to achieve their career aspirations and thrive in a competitive job market.





OUR VISION



01.

At Tech Learniversity, we envision a future where education is accessible and personalized for every learner, empowering them to thrive in a dynamic global workforce.

02.

We aim to be a leader in EdTech innovation, fostering a community of lifelong learners who drive positive change and contribute to a better society.

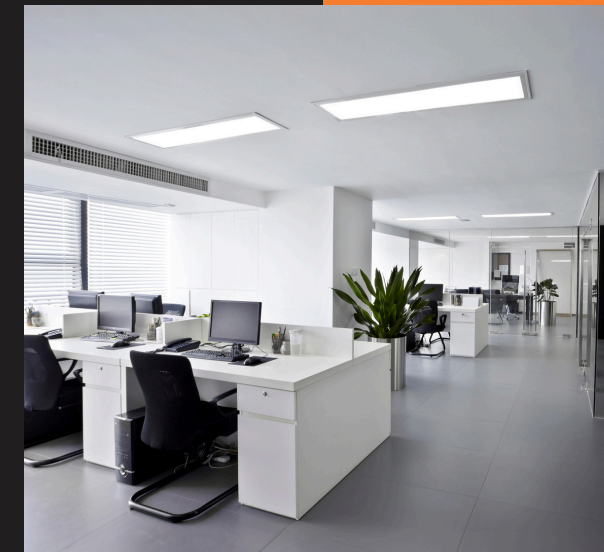
OUR MISSION

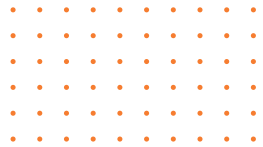
01.

At Tech Learniversity, we empower learners of all ages through innovative training programs and personalized educational experiences that foster skill development and career advancement.

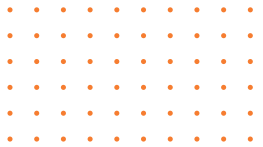
02.

Committed to diversity and inclusion, we strive to make high-quality education accessible and relevant, ensuring every individual can unlock their full potential in a competitive global workforce.





OUR SERVICE



Training

Tech Learniversity provides different types of training catering to different types of students, professionals.



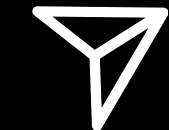
Interview Preparation

Tech Learniversity provides interview preparation services to students and professionals



Placement Assistance

Tech Learniversity provides placement assistance services.



Jobs

Tech Learniversity provides job-related services to student, professionals and companies.



M SENDIL KUMAR

FOUNDER, DIRECTOR & CEO

Under the visionary leadership of our Founder, Director, and CEO, M Sendil Kumar, we are transforming education through technology. With over 15 years of expertise in the IT field, M Sendil Kumar is passionate about making quality education accessible to all.





CONTACT US

Get in touch with Tech Learniversity



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**THANK YOU FOR
CHOOSING
TECH LEARNIVERSITY**

