

ENTRI
elevate
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DEVELOPING YOU
INTO A JOB READY
RESOURCE IN TECHNOLOGY

PROGRAM HIGHLIGHTS



PYTHON DEVELOPER

Entri Elevate



PYTHON PROGRAMMING

Python is a popular high-level programming language known for its simplicity, readability and versatility. It was created in the late 1980s by Guido van Rossum and is now widely used in fields such as web development, data science, machine learning, artificial intelligence, and automation. Python is an interpreted language, which means that it does not need to be compiled and can be executed directly by the computer. It also has a large and active community, which has contributed to the development of a vast array of libraries and tools to extend its functionality. Some of the key features of Python include its object-oriented programming paradigm, dynamic typing, and extensive support for third-party modules.



DJANGO

FRAMEWORK

Django is a high-level web framework for Python that follows the model-view-controller (MVC) architectural pattern. It was created in 2005 by Adrian Holovaty and Simon Willison. Django is known for its "batteries included" approach, providing a range of tools and libraries out-of-the-box to help developers build complex web applications quickly and efficiently. Some of its key features include a robust ORM (Object-Relational Mapping) system for working with databases, built-in security features, and a templating engine for generating HTML. Django also supports a variety of third-party packages and plugins, making it easy to extend its functionality. It has been used to build a range of popular websites and applications, including Instagram, Pinterest, and Mozilla.



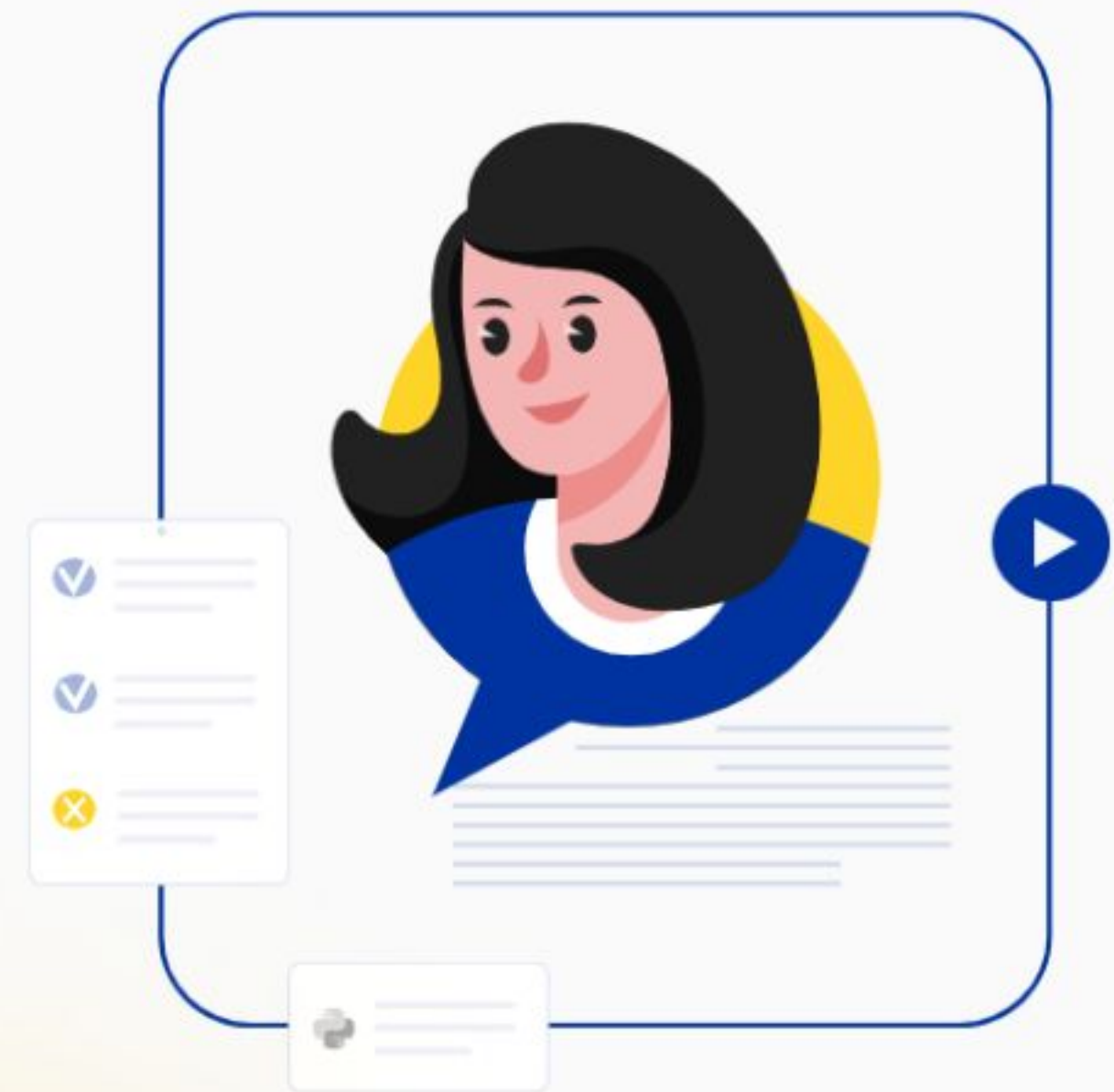
SELF-PACED LEARNING CONTENTS

Participants will be provided recorded videos of the entire syllabus.



LIVE INTERACTIVE SESSIONS

Participants can interact with trainers and other participants to enhance community learning and improve communication & collaboration skills





LIVE Q&A

Participants get mentor support on self paced learning contents.



LIVE CODING CHALLENGES

Participants can improve their competency in coding skills and communication skills.



LIVE EXPERT SESSIONS

Participants can interact with Industry experts to know about current trends in career and experience of working in industry.



LIVE SOFT SKILL TRAINING

Participants will get additional soft skills training for aiding post training placement assistance.

PERSONALIZED SKILL ASSESSMENT

Participants will be mentored to provide a learning path that matches their current skill set.



CAREER GUIDANCE & MOTIVATION

Participants will be up-skilled in technical and non-technical arenas.



LIFELONG PLACEMENT ASSISTANCE

Participants will get lifelong placement assistance from Entri until you get a job.



YOUR MENTORS



Shyam Anand
Senior Software
Engineer, Google.



Amrit Sanjeev
Staff Developer
Advocate, Google.



**Dineshkarthik
Raveendran**
Staff Data
Engineer, Tesla.



Anil Unnikrishnan
Tech Lead and
Project Owner,
NEON (Samsung).



Narayan Babu
Vice President, US
Credit & Mobile
Infra, Zeta Suite.

YOUR TRAINERS



Sreeram M R
Lead Mentor,
Entri App
Python Developer.



Ayshath Fahima
Mentor, Entri App
Python Developer.

SYLLABUS

WEEK 1: INTRODUCTION TO PYTHON

- Introduction to Python programming language
- Variables, Data Types, and Operators
- Control Flow and Loops
- Functions and Modules
- Basic Input and Output
- Basic Data Structures

WEEK 2: OBJECT-ORIENTED PROGRAMMING WITH PYTHON

- Classes and Objects
- Encapsulation, Inheritance, and Polymorphism
- Python's Special Methods
- Exception Handling

WEEK 4: INTRODUCTION TO DJANGO

- Introduction to Django Framework
- Setting up a Django project
- Django Models and Database Concepts
- Django Admin Interface
- Django ORM

WEEK 5: VIEWS AND URL CONFIGURATION

- Introduction to Views
- URL Configuration
- Django Request and Response Objects
- Template Language Basics

WEEK 3: ADVANCED PYTHON

- List Comprehensions
- Lambda Functions
- Decorators
- Generators and Iterators
- Regular Expressions
- Database fundamentals

WEEK 7: DJANGO TEMPLATES AND STATIC FILES

- Django Templates
- Django Template Inheritance
- Static Files Management
- Template Tags and Filters

WEEK 8: DJANGO MIDDLEWARE AND CONTEXT PROCESSORS

- Middleware in Django
- Creating Custom Middleware
- Context Processors in Django

WEEK 9: DJANGO SESSIONS AND COOKIES

- Django Sessions
- Cookies in Django
- Session and Cookie Security

WEEK 10: DJANGO TESTING [OPTIONAL ADVANCED MODULE]

- Testing in Django
- Django Test Client
- Writing Tests for Django

WEEK 11: DJANGO REST FRAMEWORK

- Introduction to Django Rest Framework
- Serializers and Views in DRF
- Authentication and Permissions in DRF
- DRF Requests and Responses

WEEK 12: DJANGO PROJECT – 1

- Build a Django Project
- Build a CRUD Application using Django
- Deploying Django Project to a Server

WEEK 13: DJANGO CELERY

- Introduction to Celery
- Installing and Configuring Celery
- Celery Task Definition and Execution

WEEK 14: DJANGO PROJECT – 2

- Build a Django Project
- Build a Payment Gateway Integration using Django
- Deploying Django Project to a Server

WEEK 15: DJANGO SIGNALS AND CACHING

[OPTIONAL ADVANCED MODULE]

- Introduction to Django Signals
- Caching in Django
- Using Redis for Caching in Django

WEEK 16: DJANGO PROJECT – 3

- Build a Django Project
- Build a Real-time Chat Application using Django
- Deploying Django Project to a Server

WEEK 17: DJANGO CHANNELS [OPTIONAL ADVANCED MODULE]

- Introduction to Django Channels
- Installing and Configuring Django Channels
- Building Real-time Applications with Django Channels

WEEK 18: DJANGO PROJECT – 4

- Build a Django Project
- Build a Blog Application using Django
- Deploying Django Project to a Server

WEEK 19: DJANGO DEPLOYMENT

- Preparing Django Application for Production
- Deploying Django Application to a Server
- Configuration and Optimization for Performance

WEEK 20: DJANGO PROJECT – 5

- Build a Django Project
- Build a Social Media Application using Django
- Deploying Django Project to a Server

WEEK 21: INTRODUCTION TO WEB SCRAPING

- Introduction to Web Scraping
- BeautifulSoup Library
- Scraping Dynamic Websites with Selenium

WEEK 22: DATA ANALYSIS WITH PANDAS

[OPTIONAL ADVANCED MODULE]

- Introduction to Pandas Library
- Data Manipulation and Analysis
- Working with Data Frames and Series

WEEK 23: DATA VISUALIZATION WITH MATPLOTLIB AND SEABORN [OPTIONAL ADVANCED MODULE]

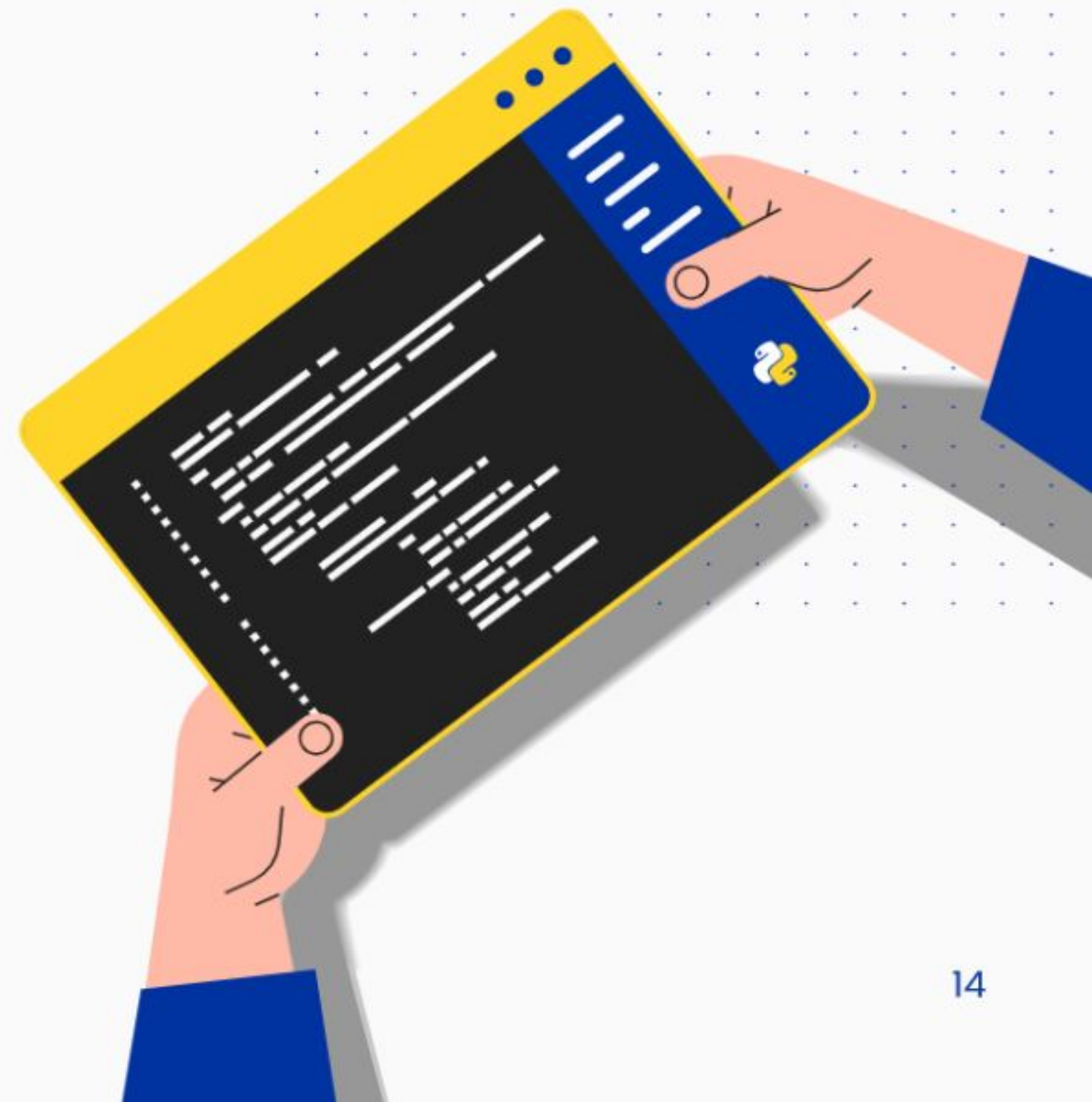
- Introduction to Matplotlib and Seaborn Libraries
- Basic Plotting with Matplotlib
- Advanced Plotting with Seaborn

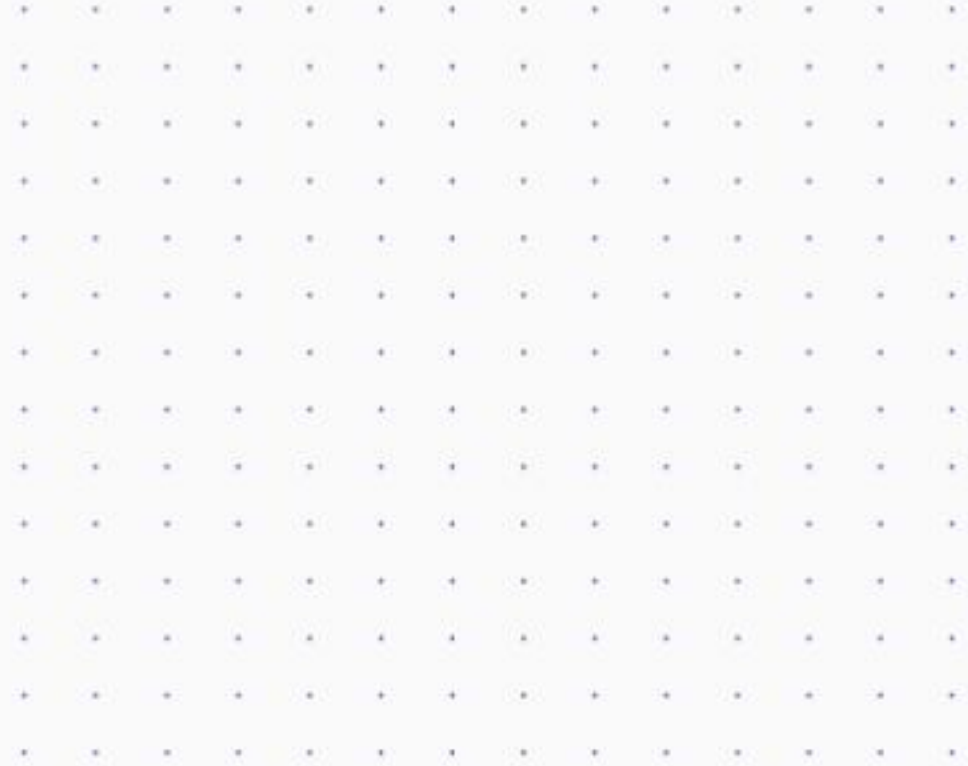
WEEK 24: MACHINE LEARNING WITH SCIKIT-LEARN [OPTIONAL ADVANCED MODULE]

- Introduction to Scikit-Learn Library
- Classification and Regression with Scikit-Learn
- Clustering and Dimensionality Reduction with Scikit-Learn

WEEK 25: FINAL PROJECT

- Build a Final Project using Python and Django
- Deploying the Final Project to a Server
- Presentation and Demo of the Final Project





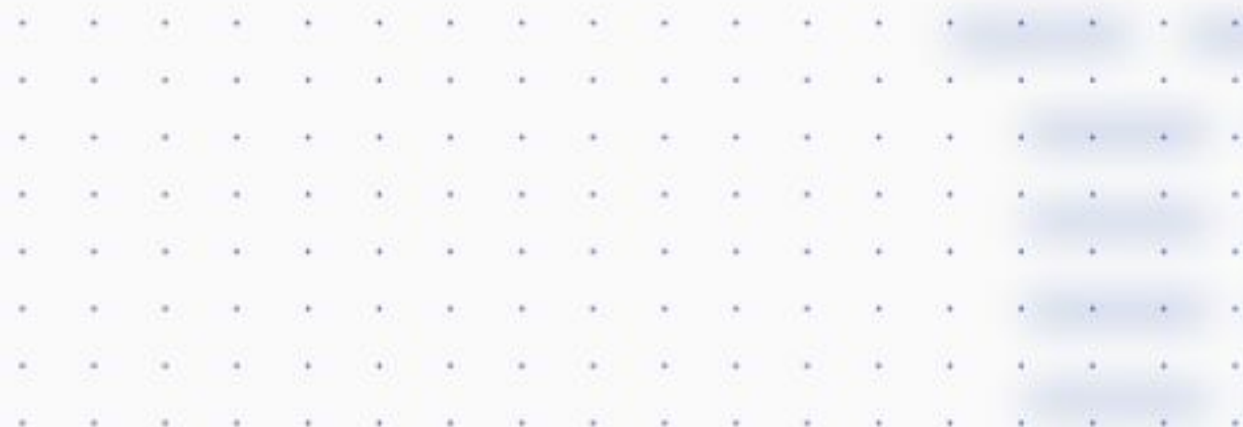
WEEKLY PROJECT IDEAS:

- **Week 1:** Simple Calculator
- **Week 2:** Bank Account Simulator
- **Week 3:** Text Adventure Game
- **Week 4:** To-Do List Manager
- **Week 5:** Simple Blog
- **Week 6:** User Authentication System
- **Week 7:** E-commerce Website
- **Week 8:** Forum Application
- **Week 9:** Chat Application
- **Week 10:** Testing a Django Application
- **Week 11:** RESTful API for a Blog Application
- **Week 12:** E-commerce Application with Payment Gateway Integration
- **Week 13:** Celery Task for Background Processing
- **Week 14:** Social Media Application with Integration of Social Media APIs
- **Week 15:** Real-time Notification System
- **Week 16:** Real-time Data Visualization Application
- **Week 17:** Real-time Game with Django Channels
- **Week 18:** Machine Learning Model Deployment with Django
- **Week 19:** Deploying a Django Application on Cloud Services
- **Week 20:** Final Project Planning and Design
- **Week 21-24:** Final Project Implementation
- **Week 25:** Final Project Presentation and Demo

GOALS OF EACH MODULE:

- Python Basics: Understanding the fundamentals of Python programming language.
- Object-Oriented Programming: Mastering the concepts of OOP and applying them in Python.
- Advanced Python: Learning advanced Python concepts and libraries to write efficient and optimized code.
- Introduction to Django: Understanding the basics of Django and its components.
- Views and URL Configuration: Building views and URLs for a Django application.
- Forms and User Input: Handling user input in a Django application.
- Django Templates and Static Files: Creating templates for a Django application and managing static files.
- Django Middleware and Context Processors: Implementing middleware and context processors in a Django application.
- Django Sessions and Cookies: Using sessions and cookies to manage user state in a Django application.
- Django Testing: Writing tests for a Django application.
- Django Rest Framework: Building a Restful API with Django Rest Framework.

- Django Project – 1: Building a CRUD application with Django.
- Django Celery: Integrating Celery for asynchronous tasks in a Django application.
- Django Project – 2: Building an application with payment gateway integration.
- Django Signals and Caching: Using signals and caching in a Django application.
- Django Project – 3: Building a real-time chat application with Django Channels.
- Django Channels: Implementing real-time communication in a Django application with Django Channels.
- Django Project – 4: Building a blog application with Django.
- Django Deployment: Preparing a Django application for production and deploying it to a server.
- Django Project – 5: Building a social media application with Django.
- Introduction to Web Scraping: Learning the basics of web scraping and scraping dynamic websites.
- Data Analysis with Pandas: Analyzing and manipulating data using Pandas.
- Data Visualization with Matplotlib and Seaborn: Visualizing data using Matplotlib and Seaborn.
- Machine Learning with Scikit-Learn: Understanding machine learning concepts and applying them using Scikit-Learn.



ARE YOU READY TO **ELEVATE?**

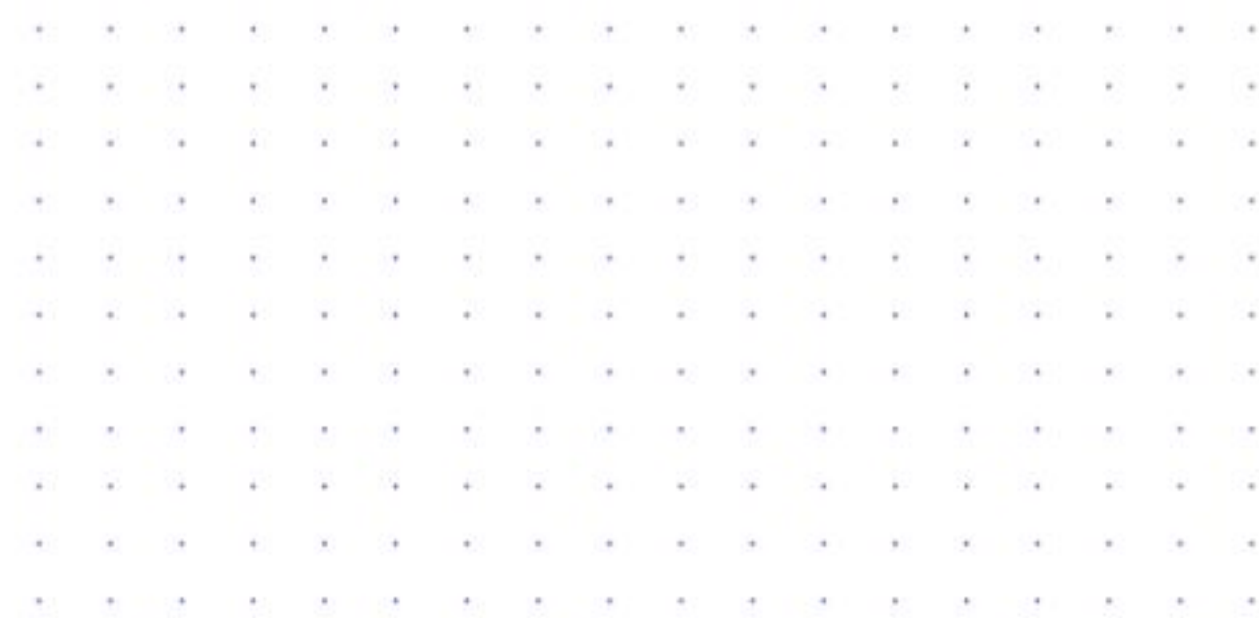
A passionate job seeker



A skilled professional

HIRING **PARTNERS**





Thank you