SYLLABUS - 100 DAYS OF CODE COMPLETE PROFESSIONAL PYTHON BOOTCAMP

BEGINNER PYTHON

- Variables in Python
- String Manipulation
- Input and Print Functions
- Variable Naming Rules Mathematical Operations in Python DataTypes
- Converting types
- Conditionals IF/ELIF/ELSE
- Logical Operators
- Randomisation
- Error Handling
- Functions
- For Loops
- Code blocks and Indentation
- While Loops
- Flowchart Programming
- Positional and Keyword Arguments Python Dictionaries and Lists Nested Collections
- Returning Functions
- Return vs. Print
- Doc Strings vs. Comments
- Scope and Local/Global Variables Debugging Techniques

INTERMEDIATE PYTHON

- Local Development Environment Setup PyCharm Tips and Tricks
- Python Object Oriented Programming Creating Classes in Python
- Using External Python Modules/Import Getting / Setting Attributes
- Python Methods
- Class Initialisers
- Module Aliasing
- Optional, Required and Default Parameters Event Listenters
- Python Instances and State

- Python Turtle
- Game Development with Python and OOP Python Inheritance
- Python Slice Function
- File I/O Reading and Writing to Local Files File Directories
- Reading and Writing to CSV
- Introduction to the Pandas Framework
- List Comprehensions
- Dictionary Comprehensions
- Packing and Unpacking Functions in Python Creating Desktop GUI Apps with Tkinter Strongly
- Dynamic Typing
- Error Handling and Exceptions
- Try / Except/ Raise
- Working with JSONs
- Local Persistence
- Sending Email with Python and SMTP Working with date and time
- Hosting Python Code Online with PythonAnywhere

INTERMEDIATE +

- APIs
- Making HTTP Requests with the Requests module Sending Parameters with the Request
- APIs with Authentication
- Sending SMS with Python
- Web Scraping with Beautiful Soup
- Browser Automation with Selenium Web Driver Automating Tinder
- Automating Twitter
- Automating LinkedIn
- Automating Instagram
- Web Development with Flask
- Command Line
- Python Decorators
- Templating with Jinja 2
- WTForms

ADVANCED PYTHON

- Build Your Own REST API with Python Build Your Own Blog
- Databases with SQLite
- Dataframe Inspection
- Data Cleaning
- Sorting Values in Dataframes
- Arithmatic Operations with Pandas
- Creating Pivot Tables
- Chaining Functions
- Smoothing Time Series Data
- Creating Line Charts with Matplotlib
- Using Jupyter Notebook
- HTML Markdown
- Creating Scatterplots with Matplotlib
- Relational Database Schemas
- Descriptive Statistics
- Creating Bar Charts, Pie Charts, Donut Charts, Box Plots with Plotly
- Creating NumPy NDArrays
- Array Slicing and Subsetting
- Matrix Multiplication
- Bitwise and Operators in Pandas Creating Bubble Charts with Seaborn Running Regressions with
- Scikit-Learn Non-Parametric Regression
- Students T-Tests and Histograms with Scikit-Learn Multi-Variable Regression
- Log Transformations
- Residuals Analysis

PROFESSIONAL PORTFOLIO BUILDING INDEPENDENT ASSIGNMENTS

- Text to Morse Code Converter Portfolio Website
- Tic Tac Toe Game
- Image Watermarking App Typing Speed Test
- Breakout Game
- Cafe and Wifi Website

- Todo List Website
- Disappearing Text Writing App
- Image Color Palette Generator
- Custom Web Scraper
- Automating the Google Dinosaur Game
- Space Invaders Game
- Custom API Driven Website
- An Online Shop
- Custom Browser Automation
- Analyse and Visualise the Space Race
- Analyse Deaths Involving the Police in the US Predict Earnings using Multivariable Regression