Python Applications Development Course

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Blocks

Module 1: Python basic usage

- Introduction to Python
- Installation and configuration of development environment
- Access to files and directories using Python
- Exceptions and error handling
- Object oriented programming using Python

Module 2: Virtual Environments in Python

- Why using virtual environments?
- Creation and management of virtual environments using `virtualenv.`
- Activation and deactivation of virtual environments.
- Installation of packages and dependencies using virtual environments.
- Good practices using virtual environments.

Blocks

Module 3: REST APIs

- Basic concepts of APIs.
- Introduction to RESTful APIs.
- HTTP methods: `GET`, `POST`, `PUT`, `DELETE`.
- Request managements and HTTP answers in Python.
- Creation of a basic API REST using `Django`.

Module 4: Django

- Introduction to `Django`.
- Configuration of routes and views.
- Templates and HTML pages rendering.
- Interaction with databases: `SQLALchemy` and `Flask-SQLAlchemy.`
- Authentication and authorization using `Django`.

Blocks

Module 5: Pandas and Numpy

- Introduction to `Pandas` and `Numpy`.
- Management and analysis of data using `Pandas`.
- Mathematical operations and array handling using `numpy`.
- Integration of `Pandas` and `numpy` in Python projects

Module 6: Python applications in Docker

- Introduction to `Docker` and containerization.
- Creation of `Dockerfiles` for Python applications.
- Building and executing `Docker` containers.
- `Docker compose` for orchestration.
- Good practices for deploying Python applications using `Docker`.

Blocks

Module 7: Fundamentals of Google Cloud Platform for Python applications

- Introduction to Google Cloud Platform (GCP).
- Configuration of a GCP project.
- Deployment of Python applications using Google App Engine.
- Data storage using Google Cloud Storage.
- Using GCP additional services like Firestore, BigQuery, etc.

Schedule

- **November 6**:
  - **10:00 AM - 1:00 PM** (3 hours)
    - Basic Python (3 hours)
- **November 7**:
  - **10:00 AM - 1:00 PM** (3 hours)
    - Basic Python (continuation) and Virtual Environments (1 hour)
- **November 11**:
  - **10:00 AM - 1:00 PM** (3 hours)
    - Virtual Environments (1 hour) and REST API (2 hours)
- **November 13**:
  - **10:00 AM - 1:00 PM** (3 hours)
    - REST API (continuation) (1 hour) and Django (2 hours)
- **November 14**:
  - **10:00 AM - 1:00 PM** (3 hours)
    - Django (continuation) (3 hours)
- **November 18**:
  - **10:00 AM - 1:30 PM** (3.5 hours)
    - Pandas and Numpy (3 hours) and Docker (0.5 hours)
- **November 20**:
  - **10:00 AM - 1:30 PM** (3.5 hours)
    - Docker (continuation) (2.5 hours) and Google Cloud (1 hour)
- **November 21**:
  - **10:00 AM - 1:30 PM** (3.5 hours)
    - Google Cloud (continuation) (2 hours) and Review and Practice (1.5 hours)

Coding experience?

https://github.com/sergiopaniego/python_application_development_course