| | |
|---|---|
| **Session 1** | **4 h** |
| **Section 1 (Introduction to Python)** | **2 h** |
| Installing and using python | 20 min |
| Data Structures | 10 min |
| Conditional Code | 30 min |
| Loops and Iterations | 30 min |
| Exercise | 30 min |
| **Section 2** | **2 h** |
| Functions | 20 min |
| Files (read, scan and process real data) | 30 min |
| Exception Handling | 10 min |
| Exercise | 30 min |
| Q/A | 30 min |
| **Session 2** | **3 h 40 min** |
| **Section 1** | **1 h 10 min** |
| Clean code concepts | 10 min |
| Classes in python | 30 min |
| Exercise | 30 min |
| **Section 2 (Data Manipulation)** | **2 h 30 min** |
| Introduction to pandas library and DataFrame | 10 min |
| Creating a DataFrame | 10 min |
| Reading a DataFrame | 10 min |
| Update data in a DataFrame | 10 min |
| Handling missing data | 20 min |
| Delete data from a DataFrame | 10 min |
| Slicing and Filtering | 10 min |
| Replacing and thresholding | 10 min |
| Group, Aggregate and summarizing data | 20 min |
| Joining DataFrames | 10 min |
| Exercise | 30 min |
| Q/A | 30min |
| **Session 3** | **4 h 30 min** |
| **Section 1** | **2 h** |
| Data Visualization | 1h 30 min |
| Exercise | 30 min |
| **Section 2** | **2 h 30 min** |
| Simple Statistical methods in python | 1h 30 min |
| Exercise | 30 min |
| Q/A | 30 min |
| **Session 4 (Neuroimaging in Python)** | **4 h 30 min** |
| **Section 1** | **2 h 30 min** |
| Introduction to Nibabel | 30 min |
| Introduction to Nilearn | 1 h |
| Brain Visualization in python | 30 min |
| Exercise | 30 min |
| **Section 2** | **2 h** |
| Introduction to fslpy | 15 min |
| simple analysis with fslpy | 45 min |
| Exercise | 30 min |
| Q/A | 30 min |