



efl -  
the Data Science Institute

## CERTIFICATE OF PARTICIPATION

# INTRODUCTION TO PYTHON FOR DATA SCIENCE

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# ACQUIRED SKILLS

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**The Participant Hafeezullah Haidari  
showed distinctive performance, while  
gaining the following skills:**

## **PYTHON BASIC SKILLS**

- **VARIABLES AND DATA TYPES**
- **DATA STRUCTURES**
- **CONTROL STRUCTURES**
- **LOOPS**
- **FUNCTIONS**

## **LIBRARY KNOWLEDGE/ SKILLS**

- **STANDARD LIBRARIES (E.G., OS, CSV, RE)**
- **DATA VISUALIZATION (SEABORN, MATPLOTLIB, PLOTLY)**
- **DATA WRANGLING (PANDAS, NUMPY)**

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Prof. Dr. Oliver Hinz  
Prof. Dr. Peter Gomber  
Heads of the efl