

# Python Mastery Python for Paper Writing & Research Course Syllabus

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Basic Concepts

Basic Python  
Knowledge

Mathematics &  
Equations  
Solving

Numerical  
Computation

Exploratory Data  
Analysis

Data  
Visualization

Data  
preprocessing

Note: At end of each section  
practices & quizzes will unlock  
in your profile including the  
needed course review materials



# Python techniques for Paper Writing and Research



# 01

## Python Knowledge needed

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- **Programming Simple Mathematics**
- **Variables**
- **Data Types**
- **Formatting Text Output**
- **Importing Modules**
- **Pitfalls When Programming Mathematics**
- **Loops for Automating Repetitive Tasks**
- **Boolean Expressions**
- **Using Containers to Store Sequences of Data**
- **Iterating Over a Containers with via for Loop**
- **Control flows**
- **Functions**
- **OOP**
- **Equations with Python Functions**
- **Test Functions**
- **Handling Errors**

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- Solve scientific and mathematical problems, and Extensive numerical computation using Numpy & SciPy
  - Tips & Techniques



# Python techniques for Paper Writing and Research



- **Exploratory Data Analysis & Data preparation, Data wrangling, Data cleaning & altering using Pandas**
- **Tips & Techniques**



# Python techniques for Paper Writing and Research



- **Data Visualization and presentation using Matplotlib & Seaborn**
- **Tips & Techniques**



# Python techniques for Paper Writing and Research



- Data Preprocessing pipeline
- Tips & Techniques



# Python techniques for Paper Writing and Research



- Analytical Projects



# Python techniques for Paper Writing and Research







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