

PYTHON IN DATA SCIENCE



AUDIENCE:

This workshop is targeted at anyone interested in Data Science. From beginners to experienced programmers looking to reinforce their data science techniques, everyone will benefit from this workshop. Professionally-made templates to fit any objective or topic.



WORKSHOP OVERVIEW

An all-encompassing program for learning to perform Data Science tasks using Python. Starting with basic Python concepts, the workshop covers two essential libraries for data analysis in Python: NumPy and Pandas. The ins and outs of these tools are introduced using simple examples. Once participants are familiarized, a real-world example is used. The workshop is hands-on, featuring numerous code samples and projects. To reinforce the concepts and aid in self-paced learning, practice sheets and quizzes are also provided.

APOORVA

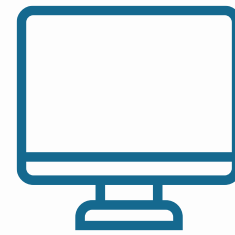
AI/ML Developer & Trainer



Education

Master of Science in Computer Science (AI) University of Oxford, UK, Oct 2015 – Sept 2016

Bachelor of Engineering in Computer Science & Engineering PES Institute of Technology, India, Aug 2009 – Jul 2013



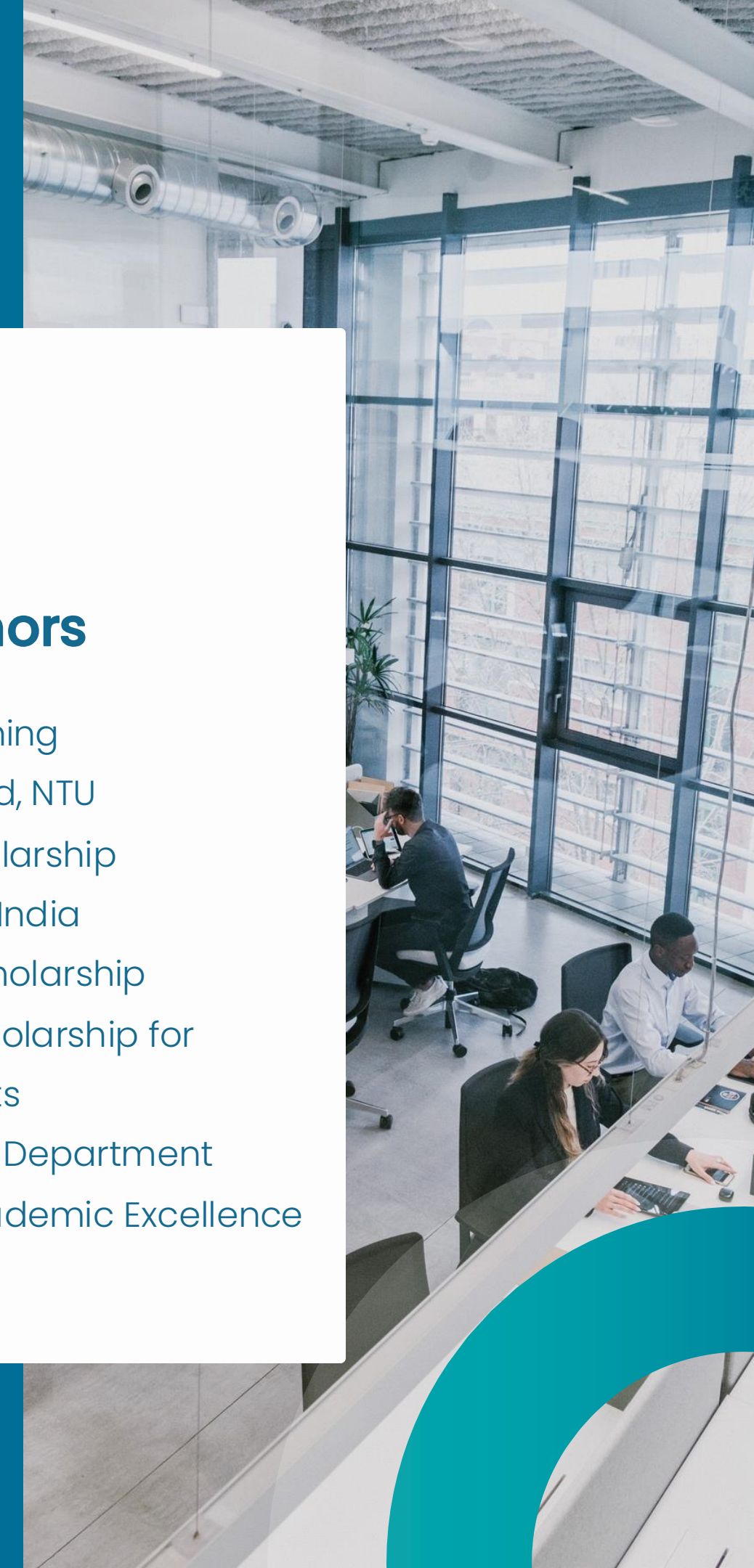
Work Experience

- ✓ Nanyang Technological University (NTU), Singapore
Research Assistant
- ✓ International Institute of Information Technology, Bangalore
Research Intern
- ✓ Taiwan International Graduate Program (TIGP-IIP), Taipei
Research Intern



Awards & Honors

- ✓ Excellence in Teaching Assistantship Award, NTU
- ✓ NTU Research Scholarship
- ✓ Full-term SAP Labs India Undergraduate Scholarship
- ✓ Full-term M.R.D. Scholarship for Meritorious Students
- ✓ Computer Science Department Scholarship for Academic Excellence



LEARNING OBJECTIVES

- Code programs using Python
- Use the NumPy package to perform fast array manipulations
- Use Pandas in their Data Science projects
- Perform data preprocessing
- Visualize data and gain insights
- Understand the given data using summary statistics



PREREQUISITES

- Basic Programming Knowledge: Understanding of basic programming concepts (loops, conditionals, functions).
- Familiarity with Statistics: Knowledge of basic statistics concepts (mean, median, variance).
- Mathematics Basics: Basic linear algebra and calculus will be helpful.
- Interest in Data Analysis: Desire to analyze, visualize, and interpret data



WORKSHOP SCHEDULE

| | Time | Topic / Module | Learning activities |
|-------|--------------------|---|----------------------------|
| Day 1 | 03:00 PM – 4.30 PM | <p>Python basics</p> <ul style="list-style-type: none"> • Syntax, comments, variables and data types • Conditional statements such as if..else • Loops such as for statements • Functions • Data collections: list and tuple | Lecture, Interactive Q&A |
| | 4.30 PM–4.40 pm | Break | |
| | 4.40 PM–5.30 PM | Google Colab practice sheets | Hands-on coding, Exercises |
| Day 2 | 03:00 PM – 4.30 PM | <p>NumPy</p> <p>1.NumPy v/s Lists</p> <p>2.1D arrays (vectors)</p> <ul style="list-style-type: none"> • Creation • Indexing • Filtering • Plotting 1.2D arrays • Broadcasting • Axis • View | Lecture, Interactive Q&A |
| | 4.30 PM–4.40 pm | Break | |
| | 4.40 PM–5.30 PM | <p>Mini-project (Implementation of activation functions in Neural Network)</p> | Hands-on coding, Exercises |

WORKSHOP SCHEDULE

| | Time | Topic / Module | Learning activities |
|-------|--------------------|--|----------------------------|
| Day 3 | 03:00 PM – 4.30 PM | <p>NumPy</p> <ul style="list-style-type: none"> • Syntax, comments, variables and data types • Conditional statements such as if..else • Loops such as for statements • Functions • Data collections: list and tuple | Lecture, Interactive Q&A |
| | 4.30 PM–4.40 pm | Break | |
| | 4.40 PM–5.30 PM | Google Colab practice sheets | Hands-on coding, Exercises |
| Day 4 | 03:00 PM – 4.30 PM | <p>Python basics</p> <ul style="list-style-type: none"> • Pandas v/s Numpy • Series, Index & Dataframe • Read from csv & excel • Data summarization • Type conversion • Extracting subset • Indexing & iteration • Adding and removing columns | Lecture, Interactive Q&A |
| | 4.30 PM–4.40 pm | Break | |
| | 4.40 PM–5.30 PM | Google colab practice sheet | Hands-on coding, Exercises |

WORKSHOP SCHEDULE

| | Time | Topic / Module | | Learning activities | |
|-------|--------------------|----------------|--|---|----------------------------|
| Day 5 | 03:00 PM – 4.30 PM | Pandas | <ul style="list-style-type: none"> • Sorting, Merging • Boolean Indexing • Pivot Tables • Group-By | <ul style="list-style-type: none"> • Data cleaning 1. Missing data 2. Duplicates 3. Wrong formats | Lecture, Interactive Q&A |
| | 4.30 PM–4.40 pm | Break | | | |
| | 4.40 PM–5.30 PM | Mini-project | Gain data insights and answer questions on a given dataset | | Hands-on coding, Exercises |
| Day 6 | 03:00 PM – 4.30 PM | Pandas | 1. Non-numerical data <ul style="list-style-type: none"> • Categorical • Time Series | 2. Visualization <ul style="list-style-type: none"> • Plotting using Seaborn • Understanding correlation | Lecture, Interactive Q&A |
| | 4.30 PM–4.40 pm | Break | | | |
| | 4.40 PM–5.30 PM | Mini-project | Use a large dataset such as Amazon Product review , perform data science tasks | | Hands-on coding, Exercises |

MATERIALS PROVIDED

- Code samples, exercises
- Certificate of completion

RESERVE YOUR SPOTS TODAY!

- **Secure your team's participation by nominating members by 29th Nov 2024, Simply reply to this email or reach out to us at support@aprimeyah.com**
- **We're excited to support your team in building the data science skills that drive success. Please don't hesitate to reach out with any questions!**



WORKSHOP DETAILS:

- **Cost per Participant: Rs 5,900/-**



Scan to Pay

- **Group Discount**
(Available for teams of 5 or more)
- **Duration: 16 Hours**
- **Mode: VILT (Virtual Instructor led Training)**



PYTHON IN DATA SCIENCE

For More Information



www.aprameyah.com