



15+ Live Projects to choose from

Only 20 Students per batch

1-on-1 doubt clearing sessions

Guaranteed

Mentored Internship





# Data Science with Python, Julia & R





## PROGRAM MENTORS



**Gnanavel Mutharasu** 

// Mentor, Instructor

Phd in Computational Biology with Artificial Intelligence applications. 10+ years of experience in Data Science, Deep Learning, Server architecture and Genomics.

CEO & Founder of Zealbots



Jeeva Chelladhurai

// Mentor, Instructor

Acclaimed technical author, speaker, innovator, CEO of Comorin Consulting Services, Ex Technical Manager & consultant at IBM with over 22 years of industry experience



Henrik Melchander

// Mentor, Instructor

Senior system developer, company CTO at Indpro AB, Sweden. Over 15 years of industry experience



Sagar Dawda

// Mentor, Instructor

Data scientist by passion and profession with a flair for teaching. Sagar is from Mumbai, Maharashtra, India.

## ABOUT NORDIC ACADEMY

Nordic Academy is an Indo-Swede online education platform offering industry relevant IT programs designed and delivered in collaboration with experienced industry professionals, thought leaders, innovators and experienced teachers.

Nordic Aademy is the sister concern of INDPRO AB, Sweden, which has over 15 years of experience in the Software industry. With a leadership team consisting of thought leaders from both India and Sweden, Nordic Academy is trying to bring the best of both worlds together.

# WHY DATA SCIENCE WITH NORDIC ACADEMY





#### **CERTIFICATE** OF INDUSTRY RECOGNITION

Earn Certificate of Recognition from INDPRO AB, Sweden



#### **INTERNSHIP FROM** REPUTED COMPANIES

**Integrated Mentored Internship Programs** from reputed companies on Data Science















#### 1-0N-1 **MENTORING**

Mentoring from industry PROs & peer-to-peer learning opportunity



#### **HANDS ON LEARNING**

Hands on learning experience through shadow projects and assignments

#### This is how it works

**ONBOARDING** 

- 1. REGISTRATION
- 2. PAY ONLINE
- 3. LMS ONBOARDING
- 4. MENTOR CONNECT
- 5. NORDIC COMMUNITY NETWORK

LEARN & EXECUTE

- 1. LIVE CLASSES
- 2. ASSIGNMENTS
- 3. REAL WORLD PROJECTS
- 4. DOUBT CLEARING SESSIONS
- 5. ONE-ON-ONE MENTORING
- 6. MENTORED INTERNSHIP(S)

CERTIFICATE

CERTIFICATE OF INDUSTRY RECOGNITION INTERNSHIP CERTIFICATE



# MENTORED INTERNSHIP OPPORTUNITY EXAMPLES





#### Analyse User Behaviour & Optimise the User Workflow Using a Machine Learning Algorithm

Based on the characteristics, we need to come up with another set of guided navigation, which can guide the user in case the user misses steps...

Data Analytics

208 students enrolled



#### Use Data Analytics to Study Music Streaming Patterns

Collect various music listeners' data and analyse it to understand their music streaming patterns & recommend songs based on their previou...

Data Analytics

143 students enrolled



#### Analyse Data Through the Smart City Mission of the Govt. of India to Highlight Current Socio-Economic...

Research on selected datasets from the Smart India City mission, to provide viable solutions for identified problems and back it up with valid...

**Data Analytics** 

47 students enrolled



#### Analysis of Sales Data of Retail Stores Across America Using Exploratory Data Analysis and Data Visualisation

Use SQL and Tableau to analyse, and visually represent data respectively, to build an analysis report on sales from retail stores

**Data Analytics** 

37 students enrolled



# Build a model to predict performance of employees, based on the visualisation and analysis of past data ...

You will be using various ML Models to predict the likelihood of an employee getting promoted based on various metrics available like previous...

Data Analytics

14 students enrolled



#### Build a Content based Movie Recommender System to recommend Movies using Open source Data in Python

Build a simple content based recommendation system using Scikit-Learn, based on the open source movie data provided

**Data Analytics** 

10 students enrolled



# Identify the best source of recruitment for a tech startup, based on previous data of candidate sources...

Analyze and visualize recruiting data to determine which source of new candidates ultimately produces the best new hires.

Data Analytics

9 students enrolled



#### Analyze Mobile App Data on various platforms and generate recommendations based on the analysis an...

Analyze the data and come up with recommendations for the favourable metrics the apps on the Apple Store and Play Store should have to have a ...

**Data Analytics** 

Be the first to enroll

10+

# PROGRAM CURRICULUM





## HANDS ON DATA SCIENCE WITH PYTHON, JULIA & R

# Week 1: Data science with python

What is data science (DS)?

Why Python?

Real world examples for python and DS

- YouTube, Facebook, Amazon

Jupyter: Installation and configuration

Git and Linux basics

# Week 2: Python core

Data types

**Operators** 

Modules and Libraries

Class and OOP

Arguments parsing and CLI

File handling

# Week 3: Number crunching with Numpy

BeUnderstanding Data Types in Python

The Basics of NumPy Arrays

Computation on NumPy Arrays: Universal Functions (ufunc) Computation on Arrays: Broadcasting

Aggregations: Min, Max, and Everything In Between

Comparisons, Masks, and Boolean Logic

Fancy Indexing. Sorting Arrays

#### Week 4: Data manipulation with Pandas VIntroducing Pandas Objects

Data Indexing, Hierarchical Indexing and Selection Handling Missing Data

Combining Datasets: Concat, Append, Merge and Join

Aggregation and Grouping, Pivot Tables

**Vectorized String Operations** Working with Time Series

High-Performance Pandas: eval() and query()

## Week 5: Immerse visualization with Matplotlib Line Plots, Simple Scatter Plots

**Visualizing Errors** 

**Density and Contour Plots** Histograms, Binnings, and Density

Customizing Plot Legends, Colorbars, Text and Annotation

Multiple Subplots Customizing Matplotlib: Configurations and Stylesheets

Three-Dimensional Plotting in Matplotlib

Visualization with Seaborn

#### Week 6: Conventional Machine learning What Is Machine Learning?

Introducing Scikit-Learn

Hyperparameters and Model Validation

Feature Engineering

**Naive Bayes Classification Linear Regression** 

**Support Vector Machines** 

#### **Decision Trees and Random Forests Principal Component Analysis**

Week 7: Conventional Machine learning - II

Manifold Learning

k-Means Clustering Gaussian Mixture Models

**Kernel Density Estimation** 

## Training models and parameter optimization Computer vision with CNN

Week 8: Deep learning with Keras

Introduction to AI with Keras

Week 9: Natural Language Processing

Natural Language Processing with RNN

Sentiment analysis from social media

Week 10: Advanced Applications Predictive forecasting

Object detection with computer vision Multi-class text classifier

Anomaly detection

Week11: Training and deploying models in the cloud

Deploy model in a web application

Al accessed by mobile app Your project selection

Deploy model in amazon web service cloud

Week12: Speed up data processing with Julia Advantages of Julia

Language basics Package management and optimizations

MNIST example in Julia

NLP with Julia Performance comparisons

## Week13: Complex data processing and plotting with R/Bioconductor

R and Bioconductor Machine Learning in R

Financial modelling Interplaying Python and R Interplaying R within Julia

## Week14 - 24 Project work

Submit your project

Get feedback

Certification

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# REQUIREMENTS

## Unix / Linux / Bash command line

- You are free to choose OS of your choice, teaching will be done in Linux environment
- 99% servers and IoT devices are running in Unix/Linux environment
- It will be hugely beneficial if you learn utilize the power of Linux commands
- Consider virtualbox to run Linux if you cannot install Linux in your system

#### Basics of any programming language

- This course focuses on Python programming language along with fundamentals of R & Julia
- Programming logics and basics will be covered
- Guidance will be provided if you need help in any Rust or systems development

#### Git

- All the teaching materials, assignments will be shared in github
- We strongly encourage to start using git command line or GUI tools
- This will ensure hands on experience and industry practices
- All your coding skills and contributions will be recorded automatically.
  which increases your chances of getting data science job substantially



# OUR HIRING PARTNERS











# OUR INTERNSHIP PARTNERS













# INDPRO CLIENTS



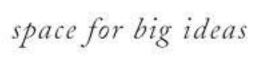


























#### **PROGRAM STARTS**

Please refer to the website for program starting dates

#### **DURATION**

90 days + Internship(s)

#### **PROGRAM FEES & PAYMENT OPTIONS**

**OPTION 1** 

INR 9,999

INR 19,999

Market Rate 19999/-

Special Introductory offer at 9,999/-

**DISCOUNT CODE: SRMSPL20** 

**OPTION 2** 

INR 13,999

INR 19,999

PAY IN INSTALLMENTS

before commencement of class for every month - Maximum of 4 Equal EMI's 13999/- ( 3500/- INR

a month x 4 months)

#### PROGRAM FLOW

3 months - Live Interactive Learning

1 month - 2 Mentored Internships

3 months - Internship with Chadura Technologies (top performers with regular attendance, contribution, skills and potential)

#### **WEEKLY COMMITMENT**

10-12 hours per week (Depending on prior aptitude)

- 2-3 hours of asynchronous learning time,
- 4-5 hours of live session,
- 4-6 hours assignments & projects

#### For further details contact us

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