

Full Stack Data Science BootCamp 2.0

This is a full stack data science course with a live mentor-led certification programme and a full-time one-year internship provided by

iNeuron intelligence private limited, where you will learn all the stack required to work in the data science, data analytics, and big data industries, including machine learning operations and cloud infrastructure, as well as real-time industry project and product

development with the iNeuron product development team, and you will contribute on various levels. Mode: self-paced **Duration:** Language: English What you'll learn:

Python

Stats

Machine learning

Deep learning

Computer vision

Natural language processing

Data analytics

Big data

MI ops

Cloud

Real Time projects

Architecture

Domain wise project

Databases

Negotiations skills

Mock interview

Interview preparation

Resume building after every module

Course Features:

Full stack Data Science master?s certification

Job guarantee otherwise refund

One year of internship Anytime

Online Instructor-led learning: Live teaching by instructors

56 + hands-on industry real-time projects.

500 hours live interactive classes.

Every week doubt clearing session after the live classes.

Lifetime Dashboard access

Doubt clearing one to one

Doubt clearing through mail and skype support team

Assignment in all the module

Quiz in every module

A live project with real-time implementation

Resume building Anytime



Career guidance Anytime

Interview Preparation Anytime

Regular assessment

Job Fair and Internal Hiring

Mock Interview Anytime

Requirements:

System with minimum i3 processor or better

At least 4 GB of RAM

Working internet connection

Dedication to learn

Pricing:

17700 INR

240 USD

Course Curriculum:

1. Welcome to the Course

Course Overview

Dashboard Introduction

2. Python Fundamentals

Python Basic

String, List, Indexing

Tuple, Set & Dict

If, Else & For Loop

For Loops & While loops

Python Program Discussion in loops

Function Part - 1

Function Part - 2

3. Advanced Python

Iterator Generator & File System

Exception handling Class 1 part 1

Exception handling Class 1 part 2

Exception handling Class 2

Module & Packages

OOPS Part 1

OOPS Part 2

OOPs Concepts - Polymorphism

4. Working with Databases & Python

SQL Part 1

SQL Part 2

OOPS Discussion

Introduction to MongoDB



Working with Python & MongoDB Part1

Working with Python & MongoDB Part2

SQL lite, map, reduce, filter, zip

5. Working with Pandas & Numpy

Introduction to Pandas

Working with Pandas

Pandas Data Analysis Part 1

Pandas Data Analysis Part 2

Pandas and Numpy

Numpy methods

6. Working with Graphs & Charts

Introduction to Graphs & Charts

Working with Graphs in Python

7. API

API Testing

8. Python Projects

Flask End to End Project

Review Scrapper

Image Scrapper and deployment on Heroku, AWS and Azure

9. Statistics

Introduction to Stats - Day 1

Stats - Day 2

Extra doubt session

Stats - Day 3

Stats - Day 4

Stats - Day 5

10. EDA & Feature Engineering

Introduction to EDA

Doubt Clearing session

EDA and Feature Engineering

11. Machine Learning

Linear Regression

Ridge Lasso Regression, Elastic & Logistic Regression

Naive Bayes Algorithm and practical implementation of Rigde Lasso and Logistic Regression

 $Logistic\ Practical,\ SSVM,\ SVR$

Decision Tree Classification

Random Forest & SVM

Adaboost

Gradient Boosting

Clustering

Introduction to Machine learning



Linear Regression

Linear Regression live coding demonstration part-1

Linear Regression live coding demonstration part-2

Project Admission Prediction, Lasso, Ridge & Elastic Net

Project deployment in Heroku, Azure & AWS

Logistic Regression

Logistic Regression implementation

Decision Tree

Decision Tree Part 2, Ensemble Tech, Random Forest & Boosting

KNN and SVM

Decision Tree Practical Implementation

Decision Tree Live Coding & Grid Search

Grid Search, Bagging Classifier & Random Forest

KNN, SVC, SVR & Stacking

Clustering

Clustering and PCA

PCA practical, DBSCAN and Naive Bayes

XG Boost, NLTK & TF-IDF

12. Machine Learning End to End Project

Machine learning project

Machine learning project

ML End to End project Pipeline Explaination

ML Project Explaination along with GitHub and Docker

Machine Learning Pipelines Live Coding Part-1

Machine Learning Pipelines Live Coding Part-2

2nd July Live Class

Machine Learning Pipelines Live Coding Part-2

Revision Class

Model training, evaluation and push

Model training, evaluation and push

Revision

13. PCA in ML

PCA

PCA Implementation

14. NLP for Machine Learning

NLP in ML

Spam Classification

15. Time Series Analysis

Introduction to Time Series

Time Series Implementation

16. Stats



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Different types of Statistics

Population vs Sample

Mean, Median and Mode

Variance, Standard Deviation

Sample Variance why n-1

Standard Deviation

Variables

Random Variables

Percentiles & quartiles

5 number summary

Histograms

Gaussian - Normal distribution

Standard Normal distribution

Application Of Zscore

Basics Of Probability

Addition Rule In Probability

Multiplication rule in probability

Permutation

Combination

Log Normal Distribution

Central Limit theorem

Statistics - Left Skewed And Right Skewed Distribution And Relation With Mean, Median And Mode

Covariance

Pearson And Spearman Rank Correlation

What is P Value

What is Confidence Intervals

How To Perform Hypothesis Testing - Confidence IntervalZ Test Statistics Derive Conclusion

Hypothesis testing part 2

Hypothesis testing part 3

Finalizing statistics

17. ML Projects

Detailed Project Report explanation

Project :- Wafer Fault Detection Part 1

Project :- Wafer Fault Detection Part 2

Deployment in Heroku using docker and circleci

18. ML Project 1 :- Fault detection in wafers based on sensor data

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Importance of Deep learning

Why you should study Deep Learning? (Motivation)

ANN

The first Artificial Neuron

29. DL ANN - Perceptron

Overview of Perceptron

More about Perceptron

Perceptron implementation using python - 1

Perceptron implementation using python - 2

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Perceptron implementation using python - 7

Python scripting & modular coding for Perceptron

Python logging basics and docstrings

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Multilayer Perceptron

Forward propagation

Why we need Activation function?

ANN implementation using tf.keras - 1

ANN implementation using tf.keras - 2

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ANN with Callbacks | Tensorboard | Early Stopping | Model Checkpointing

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Maxima and minima concept

Gradient descent basics

In-depth understanding of Gradient descent with mathematical proof

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Batch normalization -2

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Introduction to fast optimizers

Momentum optimization

NAG



Elongated bowl problem | AdaGrad

RMSProp

Adam

Loss functions

Regularization

Dropout

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Installing Anaconda, Pycharm & Postman

Working with Conda Envs

Pycharm Introduction

Pycharm with Conda

Pycharm with venv

Pycharm with Pipenv

36. Computer Vision - CNN Foundations

Why CNN? Building an Intution for CNN

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Receptive Fields, Image Output Dimensationality Calculations, MNIST Dataset Explorations with CNN

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Dropout & Custom Image Classification Dog Cat Dataset

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LeNet-5 Practical

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AlexNet Practical

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VGG16 Practical

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Inception Practical

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Resnet Practical

38. Computer Vision - Data Augmentation

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Benefits of Data Augmentation

39. Computer Vision - Object Detection Basics

What is Object Detection?

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Bounding Boxes

Bounding Box Regression



Intersection over Union (IoU)

Precision & Recall

What is Average Precision?

40. Computer Vision - Object Detection Architectures

Object Detection Family

RCNN

RCNN Network Architecture

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FAST RCNN

FAST RCNN Network Architecture

FASTER RCNN

FASTER RCNN Network Architecture

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YOLO Architecture

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41. Computer Vision - Practicals Object Detection using Tensorflow 1.x

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Installation of Libraries in Colab

TFOD1.x Setup in Colab

Visiting the Model Zoo

Inferencing in Colab

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Important Configurations Files

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42. Computer Vision - Practicals Training a Custom Cards Detector using Tensorflow1.x

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Selection of Pretrained Model from Model Zoo

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Let's start Training in Colab

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43. Computer Vision - Practicals Creating an Cards Detector Web App with TFOD1

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44. Computer Vision - Practicals Object Detection using Tensorflow 2.x

Introduction to TFOD2.x

Using the Default Colab Notebook

Google Colab & Drive Setup

Visting TFOD2.x Model Garden

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Inferencing in Local with a pretrained model

45. Computer Vision - Practicals Training a Custom Chess Piece Detector using Tensorflow2

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Let's start Training

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Convert CKPT to Saved Model

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46. Computer Vision - Practicals Creating an Chess Piece Detector Web App with TFOD2

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47. Computer Vision - Practicals Object Detection using Detectron2

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48. Computer Vision - Practicals Training a Custom Detector using Detectron2

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Registering Dataset for Training

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50. Computer Vision - Practicals Object Detection using YoloV5

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51. Computer Vision - Practicals Training a Custom Warehouse Apparel Detector using YoloV5

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58. Computer Vision - GANS

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59. Computer Vision Project - Traffic Vehicle Detection

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66. NLP Word Embeddings

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Word Embeddings Part-2

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68. NLP LSTM & GRU

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69. NLP Attention Based Model

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70. NLP Transfer Learning in NLP

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71. NLP Project:- Text to Speech

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75. NLP Project:- Machine Translation & Keyword Spotting

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76. NLP Project:- Keyword Extractor & Summarization

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77. NLP project:- Paraphrasing

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78. AIOPS Introduction

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Introduction 2

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79. AIOPS Linux

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What is Linux

Important Pieces in Linux

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83. BigData - Introduction to Distributed Systems - Hadoop and MapReduce

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84. BigData - Map Reduce & YARN

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85. BigData - Hive

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86. BigData - Hive Hands On

Apache hive Hands On

87. BigData - NoSQL and Hbase

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Hbase hands On

88. BigData - Spark

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Big Data Engineering using PySpark-RDDs

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Spark hands on - Databricks

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- 2.0 Basic Charts in Power BI Desktop
- 2.1 Column Chart in Power BI
- 2.2 Stacked Column Chart in Power BI
- 2.3 Pie Chart in Power BI
- 2.4 Donut Chart in Power BI
- 2.5 Funnel Chart in Power BI
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- 4.0 Table and Matrix in Power BI
- 4.1 Creating a Table in Power BI
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- 4.6 Conditional Formatting in Matrix
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- 4.8 Sub-Total and Total in Matrix
- 4.9 Number Formatting in Table

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Dialogflow - Prebuilt Agents

Dialogflow - Multilingual agents

Dialogflow - Mega agents

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Dialogflow - Create and manage intents

Dialogflow - Training Phrases

Dialogflow - Actions and parameters

Dialogflow - Responses

Dialogflow - Rich response messages

Dialogflow - Default intents

Dialogflow - Entities



Dialogflow - Entity options

Dialogflow - System entities

Dialogflow - Custom entities

Dialogflow - Contexts

Dialogflow - Input and Output contexts

Dialogflow - Follow-up intents

Dialogflow - Follow-up intents creation

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Dialogflow - Inline editor

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110. Interview Preparation - Transition Stories

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116. Interview Preparation - Interview Questions Discussions

Interview Question Discussion - 1

Interview Question Discussion - 2

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117. Interview Preparation - General Discussion

Discussion Session - 1

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Instructors:

1. Sunny Bhaveen Chandra

Sr. Data Scientist and lecturer at iNeuron.ai with working experience in computer vision, natural language processing and embedded systems. Hands-on experience leveraging machine learning, deep learning, transfer learning models to solve challenging business problems. Also, he has a vast interest in Robotics.

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2. Krish Naik

Having 10+ years of experience in Data Science and Analytics with product architecture design and delivery. Worked in various product and service based Company. Having an experience of 5+ years in educating people and helping them to make a career transition.



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4. Sunny Savita

I'm an AI enthusiast, graduate in Computer science and engineering. Currently working with iNeuron.ai as a Data Scientist and having 2+ years of experience. I have skills in big data, machine learning, computer vision, Natural language processing. My expertise also includes project design development and implementation with AIOps tools.

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