TRAINING BASKET
QUALIFY FOR TOMORROW

Full Stack Data Science EXPERT

Build a portfolio, create a network, and land your dream job.

www.trainingbasket.in

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Welcome

The Job Ready curriculum from Training Basket is a structured, self-paced online instruction that will give you complete knowledge of Data Science in just six months. As a Full Stack Data Scientist, you'll construct attractive, interactive AI applications using Python and its libraries. Our Data Science experts from the industry take you through from scratch to the advanced level and give exposure to industry-level projects from the ground up and provide you with a solid foundation in AI. You'll learn about Machine Learning, which is used to train models. This course will culminate in the study of Python which is the most widely used programming language on the planet.

AI enables technical systems to perceive their environment, deal with what they perceive, solve problems and act to achieve a specific goal. This is a one-of-a-kind online learning environment.

Bootcamp-style program that prepares you for a high-paying career in tech

Each unit in the Training Basket curriculum teaches a core concept, skill, language component, or framework. You learn by viewing videos, and you may reinforce your skills by doing interactive programming quizzes and challenges. Mini-exercises will help you implement everything you've learned, and then you'll apply all you've learned in an individually graded, hard assignment with feedback. After completing more than 10+ projects in this training and passing the final exam, you will receive a Training Basket Certificate of Achievement and have the skills that will better prepare you for entry-level employment as a Data Scientist.

Designed For Success

Online learning may be difficult, and we understand how difficult it can be to learn on your own. Thankfully, We've created AWARD-WINNING LMS to Learn through 24*7 interactive LMS with PPTs, Videos, Assignments, Case Studies & Quizzes along with a progress tracker with flexibility to match your needs your hectic way of life.

Key Benefits of this Job-ready Training

- Study at your own pace
- Live support and an online community
- Study and career guidance
- A professional and finished portfolio

Our Mission

Training Basket works to make education more inclusive and accessible so that individuals may accomplish their goals. We've taught over 50,000 individuals how to code and design since 2017, and our objective is to achieve long-term, systemic change in the IT industry. Competency-based learning is used in Training Basket training programs to reinforce what students have learned. We've reinvented the learning process and created a tried-and-true approach to help you get the skills and information you need to achieve your objectives. Stay on track with our points system, badges, and weekly activity journal, which has been scientifically proved to enhance motivation. You didn't merely view a video when you finished a course; you learned, practiced, and internalized an idea. Plus, at the end of each lesson, Training Basket walks you through an immersive project, so you'll have a portfolio of work ready to present as soon as you're through. Our Job-Ready programs are geared toward beginners

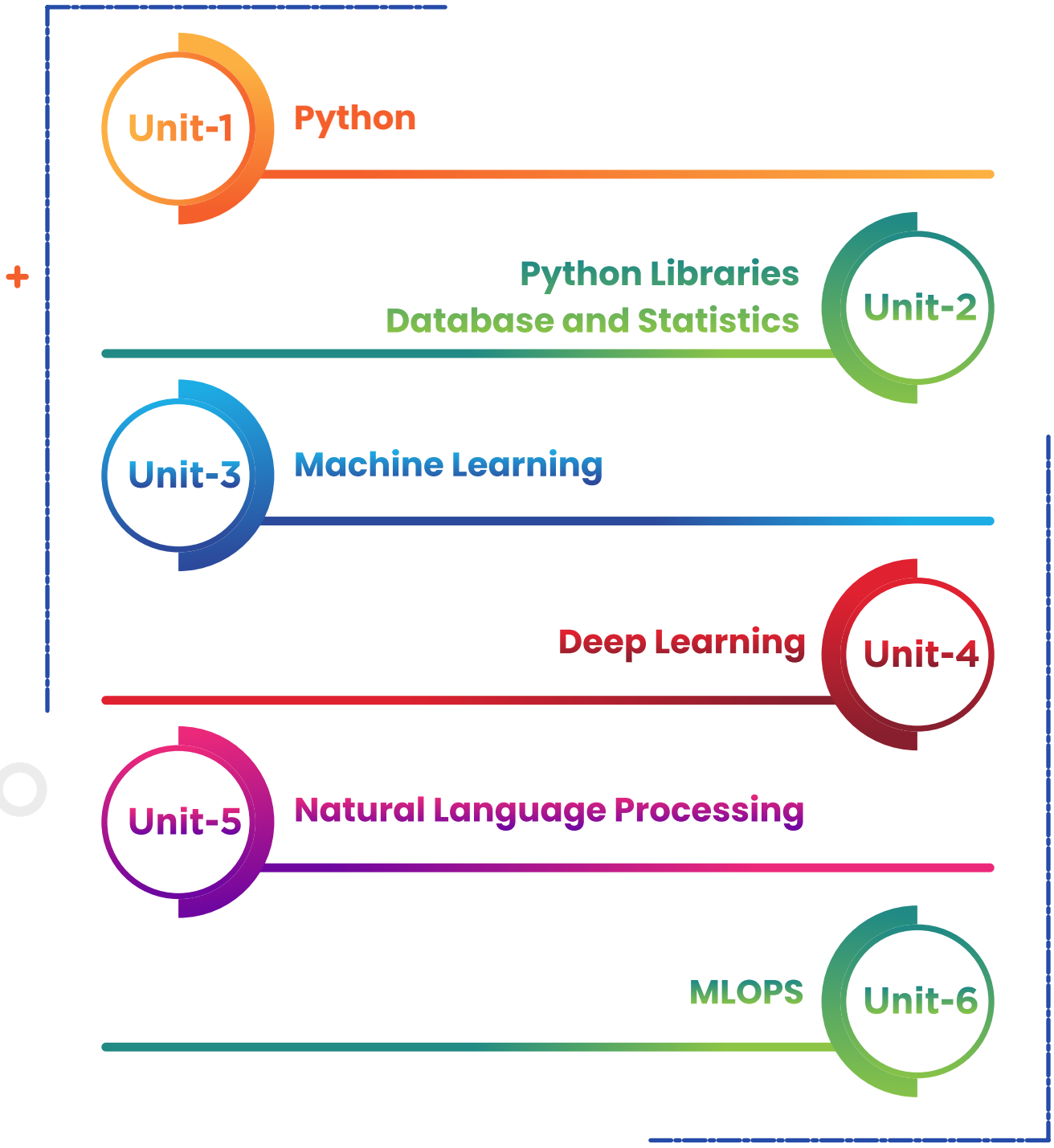
Training Basket's mission is to diversify the tech industry through online-learning

however, if you already have some experience but want to advance, Training Basket offers current and relevant skills to help you reach where you need to go. You'll additionally benefit from the Training Basket Slack, a thriving online community where you can ask questions and network with other students, regardless of your past experience level. You'll have weekly office hours, and Training Basket support professionals will be accessible for advice and encouragement.

We designed this program to be an accessible alternative to bootcamps

We concluded that in order to diversify the IT industry, we needed a curriculum that was fully beginner-friendly, didn't result in student debt and didn't demand any repayment. Many bootcamps cost huge amounts of money, or worse, force graduates to take a share of their salary when they obtain a job. At a fraction of the cost of bootcamps, Training Basket provides high-quality courses, comprehensive learning assistance, and professional expertise.

Units & Overview



Unit-1

Python

Week 1-5

Intro to data science and python

- Case study based discussion and problem solving thought process initiation
- Different Analytical Domain Industry mentors guest talk

Python

- Python , Anaconda and relevant packages installations
- Structure of python program (comments , indentations)
- Operators
- Data type , variable
- User input ,string methods

Data structure

- Mutable /Immutable
- List/tuple
- Sets / Dictionary
- List , sets and dictionary comprehension

Control Structures

- If,Else , Elif and Nested if else
- While and For loop
- Break and Continue
- Keywords in python
- Pattern making

Functions

- Basic functions
- Built-in
- User defined functions
- *args , **kwargs

Advanced Functions

- Maps , filter, reduce
- Iterators and iterables
- Closures / decorators
- Generators

Unit-1

File Handling and Exception Handling
Raise error and Built in errors

Object Oriented Programming

- Class , Object
- Data abstraction , encapsulation , Inheritance, Dunder methods
- Customized modules

Flask

Multithreading and Multiprocessing

Assignments
Assignment with 15 questions
Assignment with 10 question

Unit-2

Python Libraries Database and Statistics

Week 6-10

Numpy

- Indexing/slicing
- Appending /Inserting on axis
- Mathematical and statistical operations
- Sort/Condition
- Transpose Operations
- Joining/splitting
- Linear Algebra

Pandas

- Data Extraction
- Series/Dataframe Creation
- Indexing and Slicing
- Conditions/Grouping/Imputations
- Append/concat/merge/join
- Datetime functionalities and resampling
- Excel functions

Data visualization with Matplotlib and Seaborn

- Customization of matplotlib and seaborn
- Scatterplots/barplot/histogram/density plots
- Box Plot and outlier detection
- Visualization Linear relationship
- Univariate , Bivariate and Multivariate analysis

Data base

- Mysql
- MongoDB

Unit-2

Statistics

- Probability
- Conditional Probability
- Dependent and Independent events
- Bayes Theorem
- Descriptive / Inferential
- Variance / standard deviation
- Covariance And correlation(Pearson/Spearman)
- Central Limit theorem
- Pdf , cdf , pmf
- Types of distributions
- Confidence Intervals
- Hypothesis testing
- Z Test,t test,chi-2 test
- F-test/Anova

Project 1 : Analysis on coivid-19 data(india)

Libraries used in Project :
statistics pandas matplotlib,seaborn and numpy

Unit-3

Machine Learning

Week 11-18

Introduction to Machine Learning

- Difference Between AI, ML and DL
- Applications of Machine Learning
- Categorization of Machine Learning
- Supervised / Unsupervised / Semi Supervised
- Parametric vs NonParametric

Supervised (Regression/ Classification)

Regression

- Linear Regression
- Polynomial Regression
- Lasso Regression
- Ridge Regression
- Stepwise Regression
- Bayesian Regression

Classification

- Logistic Regression
- KNN
- SVM (Support Vector Machines)
- Decision Tree
- Naive Bayes
- LDA
- Classification for Imbalanced Dataset

Ensemble Learning

- Random forest
- Adaboost
- Gradient boosting
- Xgboost

Unsupervised Learning

- K-means
- PCA
- Hierarchical Clustering
- DBSCAN/ HDBSCAN

Scikit Learn

- Introduction to SciKit Learn (sklearn)
- Sample Dataset in SciKit Learn
- Artificial Generation of Dataset

Unit-3

EDA and Data Wrangling

- Null Values Imputation
- Outlier Detection
- Univariate/ Bivariate/ Multivariate Analysis
- Encoding
- Label Encoder
- Ordinal Encoding
- One Hot Encoding
- Scaling
- MinMaxScaling

Feature Selection and Dimensionality Reduction

- Feature Selection
  - Filter Methods
  - Wrapper Methods
  - Embedding(Ridge /Lasso)
- Dimensional Reduction
  - PCA
  - AutoEncoders

Modeling

- Train/ Test Split
- Assumptions
- Basic Modeling
- Under fitting, Over fitting, Bias and Variance
- Loss Functions

Cross-Validation and HyperParameter Tuning

- Holdout Validation
- K-fold cross Validation
- Stratified Kfold
- Cross_val_score
- GridSearchCV
- RandomizedSearchCV

Evaluation Metrics and Improvement Techniques

- MSE/ MAE/ R2/Adjusted R2
- Accuracy measurement
- Confusion Matrix
- Precision/ Sensitivity/ Specificity/ F1 Score
- AUC/ ROC

Criteria to Select Models

- Bias vs Variance Trade offs

Unit-3

Time Series:

- Stationarity
- AutoRegression/ AutoCorrelation
- ACF vs PACF Plots
- Smoothing Time Series
- Dicky Fuller Test
- Time Series Decomposition
- Modeling and Forecasting
- AR/ MA/ ARIMA/ SARIMA

Project 2: Advance House Price Prediction

Libraries used in project :
Sklearn , pandas, numpy,seaborn,scipy,matplotlib

Project 3. Water quality test

Libraries used In project:
Sklearn , pandas, numpy,seaborn,scipy,matplotlib

Project 4. Flight price prediction

Libraries used In project:
Sklearn , pandas, numpy,seaborn,scipy,matplotlib , flask

Project 5. Stock price prediction

Libraries used in project:
Sklearn , pandas, numpy,seaborn,scipy,matplotlib

Unit-4

Deep Learning

Week 19-23

Deep Learning

- Artificial Neural Networks In Python
- Perceptron and relate it with Logistic Regression
- Multiple layer Neural network
- Similarities and Differences with Basic ML
- Forward Propagation
- Back Propagation Algorithm
- Vanishing Gradient and Exploding Gradient
- Activation Functions:
- Non Linearity
- Sigmoid / Tanh Function
- Relu /Leaky Relu /Gelu
- Softmax Function
- Optimizers
- Gradient Descent
- Stochastic Gradient Descent

Momentum

- AdaGrad
- RMSProp
- NAG
- Adam/ Nadam

Tensorflow:

- Tensors
- Session
- Placeholders and Variables
- Hands on with Tensorflow
- Graphs

Keras:

- Purpose of Keras
- Sequential vs Functional
- Model Creating
- Using while Regression and Classification

Pytorch

- Tensors
- Autograd
- Graphs
- Pytorch.nn
- Control Flow and Weight Sharing

Unit-4

OpenCV

- Read/ Write Images
- Gray to BGR
- Filter2D
- Scaling/ Rotation
- Laplace Transformation

Types of Networks

- Feed Forward Networks
- Fully Connected Networks
- Recurrent Neural Networks
- Convolutional Networks
- RBM
- Deep Belief Networks

CNN(Convolutional Neural Network)

- Convolution/ Filters/ Pooling
- Backpropagation in CNN
- Masking and RoI
- Types Of CNN
- RCNN, FastRCNN, YOLO

Architectures

- LeNet/ Alexnet
- VGG 16/ 19
- ResNet
- MobileNet

Project 6. Face recognition on custom dataset

Libraries used in Project:
Numpy , pandas,matplotlib, seaborn,tensorflow , keras

Project 7. Image classification on custom dataset

Libraries used in Project:
Numpy , pandas,matplotlib, seaborn,tensorflow , keras

Unit-5

Natural Language Processing

Week 24-26

- Recurrent Neural Networks
- Classical RNN
- LSTM/GRU
- Vanishing Gradient
- Exploding Gradient
- Bidirectional RNN
- Transfer Learning
- ImageNet
- Need of Transfer Learning
- Freezing of Layers
- Reusing of Structure
- WordEmbedding
- Frequency vs Production based embedding
- Count Vector/ TFIDF/ Co Occurrence
- Bag of Words / Skip Gram
- Word2Vec /GloVe
- Syntactic and Semantic Analysis
- Tagging

Attention Mechanism

- Soft and Hard Attention
- Local and Global attention
- Monotonic Alignment and Predictive Alignment
- Multi headed Attention

Miscellaneous

- Semi Supervised Learning
- Transformers/Bert/GPT3
- Graphs and GNN

Project 8. Language translation
Libraries used in project :
Numpy,pandas,matplotlib,seaborn,tensorflow,keras,numpy

Project 8. Spam classification
Libraries used in project :
Numpy,pandas,matplotlib,seaborn,tensorflow,keras,numpy

Project 9. Text classification using Bert
Libraries used in project :
Numpy,pandas,matplotlib,seaborn,tensorflow,keras,numpy

Unit-6

MLOps

Week 26-30

Github

- Life Cycle
- Local Repository
- Add / Commit / Push / Pull
- Merge
- Stas

AWS

- AWS Servers
- AWS Sagemaker
- S3 Buckets
- Build Train Deploy

Docker

- Architectures
- Images
- Containers
- Container Linking
- Instruction Commands

Spark

- RDD
- Pyspark
- Broadcast and Accumulator
- Mlibb

Capstone Projects

1. Fake News Detection Using Python
2. Medical Image Segmentation (Polyp segmentation)
3. Credit card fraud detection
4. Project on Sentiment Analysis
5. Project on Speech Recognition through the Emotions

Interview Preparation

Assessment

Our lecturers are working experts in the field of technology who give useful and constructive advice.

This Job-Ready curriculum incorporates project-based learning, which allows you to apply the skills you're learning by working on projects of increasing complexity. Each project you create will be evaluated separately using a thorough grading criteria that is specific to that assignment. Aside from an overall grade of Exceeds, You will receive individualised written feedback on your project in the form of Expectations, Meets Expectations, or Needs Work. Don't panic if your project is labelled as Needs Work.

You'll have the chance to fix the problems and resubmit the project for further assessment. As you go through the course, you will show your developing skill set by completing quizzes and coding tasks, culminating in a Final Exam. The Final Exam is your opportunity to demonstrate what you've learned during this Training. You must correctly answer at least 70% of the questions on the Final Exam in order to succeed. If you don't meet that standard, you can study and repeat the exam the next day.

Statistics on a Career

You'll be ready to start your new job in the tech business after you have your Certificate! As an entry-level Data Scientist, these are some of the options available to you.

Day to Day Tasks as a Data Scientist

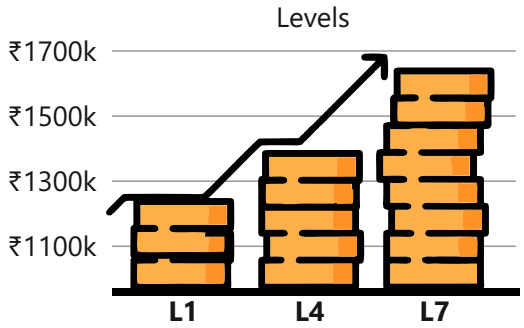
- A data scientist's daily tasks revolve around data
- Gathering data and looking at data
- Shaping data, but in many different ways and for many different reasons

₹11,00,000

According to Glassdoor.com, the typical base income in INDIA

A typical entry-level Data Science job pays ₹60,000 higher per year than the National Average Wage Index.

With new technologies being invented every day, the IT sector has been rising year after year and shows no signs of slowing down.



Average Salary Growth

Testimonials

Initially, I thought online training wouldn't work. But After Joining the Training Basket, I realized online training classes are more convenient. We can learn study material at any time using LMS. Trainer mainly focuses on real-life scenarios like how to handle the complexity of the issue. Thank you so much, Training Basket, for providing excellent service.

- Nagaraju

I got placed after completing the course of Data Science. It was excellent training; the detailed course content and support system were terrific. I will recommend the Training Basket without any doubt.

- Vipin Kumar

The excellent learning experience with the Training Basket. Great efforts from the instructor and outstanding support assistance. The guidance was very appreciable. I would recommend Training Basket to my friends and colleagues

- Priya Singh

Partnerships

We collaborate with a number of IT businesses to guarantee that our students receive the most up-to-date and relevant education possible.

Companies With Which We Collaborate