Machine Learning Foundation

Machine Learning Foundation is your first step towards careers in Data Analysis, Data Science, Machine Learning, AI, and more! This helps you learn Python and Statistics. It consists of 4 projects and is perfect for beginners in the field of data.

SKILL COVERED

1. Introduction to Programming
2. Descriptive Statistics
3. Linear Algebra
4. Inferential Statistics
5. Evaluation and Verification

JOB OPPORTUNITIES

1. Machine Learning Engineer
2. Data Scientist-Machine Learning
3. Data Engineer-Machine Learning

PREREQUISITES

No coding experience needed

In order to succeed, we recommend having experience using the web, being able to perform a search on Google, and (most importantly) the determination to keep pushing forward!

Why take this Foundation Program?

Machine learning is taking over the world - it is benefiting companies across industries. It is helping organisations create systems that can understand, learn, predict, adapt, and operate on their own. Thus, understanding how machine learning works is one of the most valuable and useful things you can do.

Whether you’re launching a career, advancing a career, or just excited to learn a new skill, there is no time like the present to get started on a Machine Learning path. This Foundation program offers everything you need to kickstart your Machine learning journey—with no prior programming skills required.

What You Will Learn

LESSON 1

Introduction to programming

1. Concepts of Python programming.
2. Configuration of development environment.
3. Standard library functions. Variables and strings.
4. Functions, control flows and loops.
5. Structured data: list and for loops; how to fix the problem.

LESSON 2

Descriptive Statistics

1. Research methods and visualization of data.
2. Concentration trends.
3. Variability and standardization.
4. Normal distribution and sampling distribution.
5. Statistical tests: hypothesis test, T test, ANOVA, chi-square test.
6. Regression and correlation.

LESSON 3

Inferential Statistics

1. Data analysis process: Learn how to use data to answer questions.
2. NumPy and Pandas operations for one-dimensional data.
3. NumPy and Pandas operations for two-dimensional data.
4. Data modelling: Understand the basic types of data and learn how to handle data sets.

LESSON 4

Evaluation and verification

Learn how to use the accuracy rate or recall rate and other indicators to test and measure to improve performance.

Projects that you will build

PROJECT 1

Explore Bikeshare Data

You will perform data wrangling to unify the format of data from the three systems and write code to compute descriptive statistics.

PROJECT 2

Analyze a Perceptual Phenomenon

Compute descriptive statistics and perform a statistical test on a data set based on a psychological phenomenon, the Stroop Effect.

PROJECT 3

Explore the dataset

Select a data set and use Pandas and NumPy to answer the questions you are most interested in, and create a report sharing the answers.

PROJECT 4

Forecast Prices

In this project you will build a model that can predict Boston housing prices.