Intro

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According to the TIOBE Index for January 2022,

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Python is the programming language with the highest increase in ratings in one year,

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making it officially the top choice of employers and professionals alike.

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In fact, it has become a key prerequisite to landing a job in data science. Luckily,

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Python is also very beginner friendly. So, if you’re an aspiring data analyst or data scientist,

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learning Python is certainly the way to go. That said, our job is to make every step of your

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learning curve easy and enjoyable. So, If you’re still new to Python, you might want to start

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for free with our Introduction to Python course. We’ve provided a link in the description. But if

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you already have some basic Python experience and want to take it to the next level, in this video

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you’ll discover 4 interesting Python projects for beginners – all including code for practice!

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Great! So, let’s start with project number 1 - Uber Trips Analysis

Uber Trips Analysis

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Since it was founded in 2009, Uber has become one of the most famous unicorn companies, offering its

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services to more than 80 countries worldwide. This Python project for beginners aims to

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analyze Uber rides to detect specific patterns, such as the busiest day or

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the time with the lowest number of rides. And as you might expect, this is the easiest

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project to start with. You will get familiar with the common steps of analyzing a dataset and how

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to draw insights from data through visualizing the relationship between different variables.

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In our opinion, there are 3 main reasons why this is an interesting Python project to try out.

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First, it’s really easy and doesn’t take much time.

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Second, since it’s famous, thousands of people have shared their code on GitHub and Kaggle,

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so you have the chance to discover different ways to analyze the same dataset. And, finally,

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despite its simplicity, this quick project is quite useful because it will help you solidify

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the foundational rules of coding in Python. By doing this project you will learn how to:

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o Read a dataset and display records from it o Use your detective’s hat and uncover hidden

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patterns in data o Find the

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relationship between different variables o Draw insights by visualizing these relationships

The Discovery of Handwashing

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Python Project 2: The Discovery of Handwashing

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Prior to the nineteenth century, hygiene was frowned upon. People simply didn’t understand

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the risk of not washing their hands. This unreasonable behavior caused many deaths,

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especially in hospitals where most doctors—unlike today—never washed their hands before surgeries.

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In the mid-1800s, the Hungarian physician, Dr. Ignaz Semmelweis, decided to do something about

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this tragedy. He started investigating the reasons behind the deaths in Vienna general hospital

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and those of women giving birth in particular. After analyzing data from Clinic 1 and Clinic 2,

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it turned out the proportion of deaths in Clinic 1 is much higher than that in Clinic

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2. Then he was able to investigate further and find the cause through data analysis.

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What’s truly exciting about this project compared to the other Python projects for beginners,

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is that you will recreate the steps that someone did 200 years ago!

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What Will You Learn from This Python Project?  Read a dataset and display records from it

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 Display the relationship between variables through different periods

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 Visualize the effect of handwashing on decreasing the number of deaths

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The third Python Project we recommend - Predicting Parkinson’s Disease with XGBoost

Parkinsons Disease

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Can you improve people’s health and save their lives with just a few lines of code?

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The answer is yes. Data science has countless

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applications in healthcare, and one of them is to predict certain diseases, especially chronic ones.

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Consider this. If you’re planning to go out, you normally check the weather news the day before

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so that you can prepare. if it’s going to rain, you’ll grab an umbrella and wear a raincoat.

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And if the forecast says it is going to be hot, you’ll wear light clothes. The same approach

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is valid for disease prevention. If you are aware of the risk to catch a certain disease,

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you will have the time to think and prepare, which can save a lot of suffering and money.

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In this project, you’ll carefully analyze a dataset of 195 records to predict the

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likelihood of having Parkinson’s disease using an XGBBoost model.

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What Will You Learn from This Python Project?

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 How to Read and explore data  Understand the relationship between

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different variables through visualization  Carry out feature selection to determine

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the variables that are most related to the target output.

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 Build a machine learning model  Use metrics, such as accuracy and ROC curve,

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to evaluate the model’s performance.  Save the trained model into a file

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to be used for future predictions. Python Project 4: Detecting Fake News

Detecting Fake News

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You see them every day. News is an integral part of our perception of the world,

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so it’s really important to pay attention to genuine media reports and ignore the

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untrustworthy ones. How can you possibly do this? Again, the answer is by using data science.

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In this project, you’ll apply a PassiveAggressiveClassifier to

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differentiate between real and fake news. The exciting thing about this beginner

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Python project is that you can turn it into a live product that helps people!

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This Python project will teach you how to:  Read and explore a textual dataset

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 Build a machine learning model

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with TfidfVectorizer  Create a confusion matrix

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and understand its components  Evaluate the model’s accuracy

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The links we’ve provided in the description of the video would allow you to access these projects

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and give them a try. If you want to learn more on topics like data strategy, data visualization,

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machine learning, and business analytics the 365 data science platform might be the perfect

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fit for you! So, make sure you check out the special offer we’ve provided in description.