Designed by Kevin Martínez

Python

Crash Course

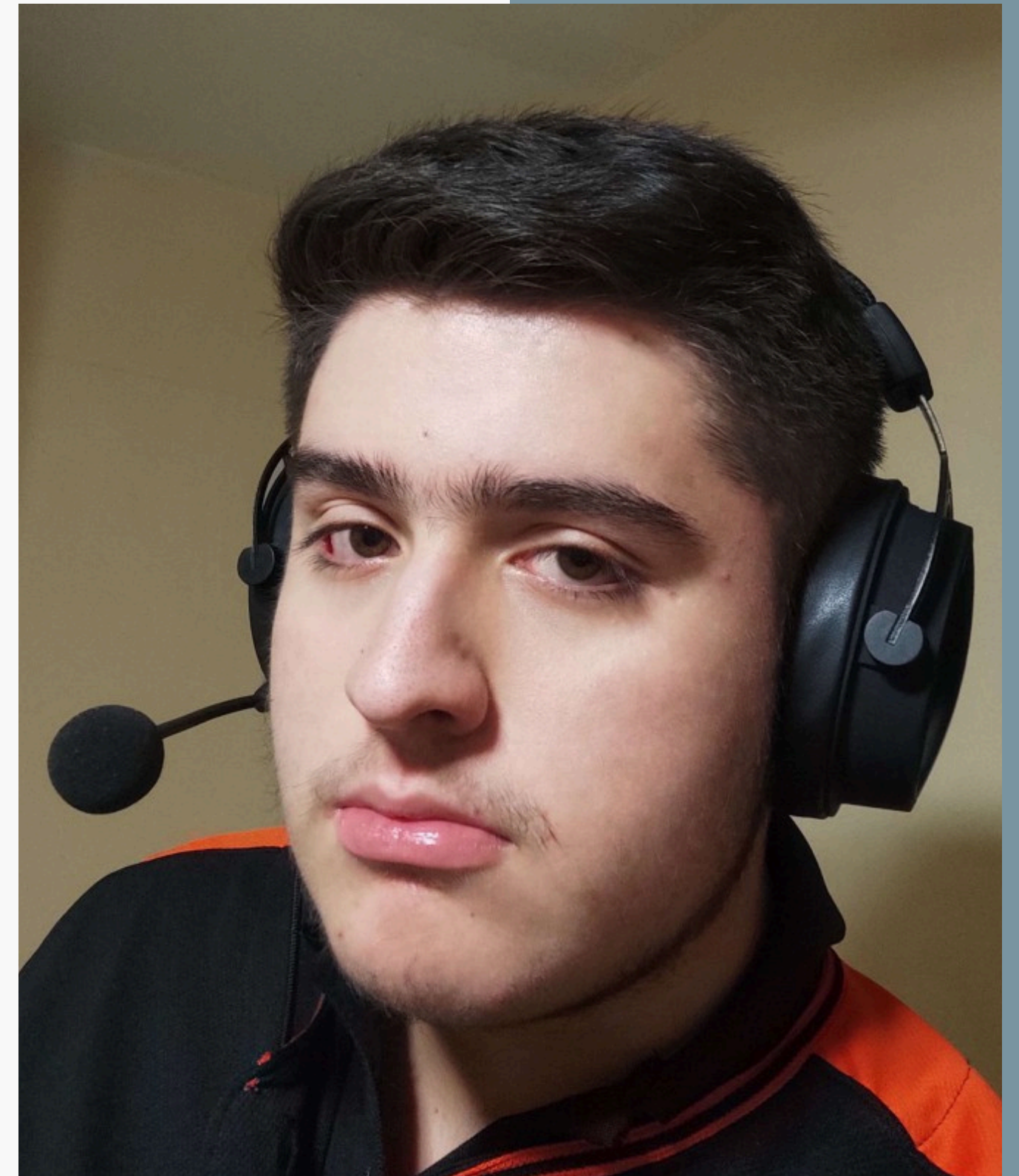A scientific approach

Instructor's Background

Data Scientist & Machine Learning Researcher

First instructor at JGCC Coding CLub

Student of Information Systems Engineering

Fullstack Developer at Enroque

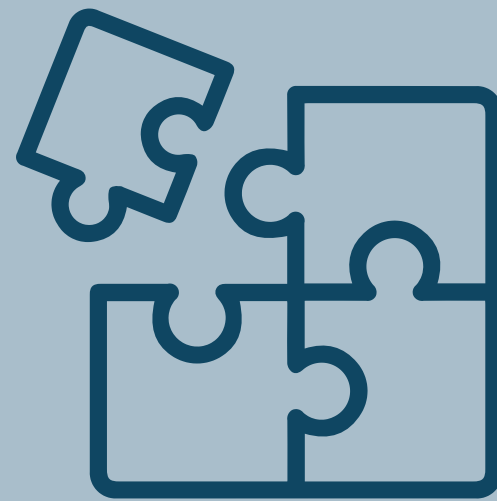Research Assistant for the Industrial Engineering

Department

Course Sections

Introduction

- Brief introduction to the Python language and it's basic functions
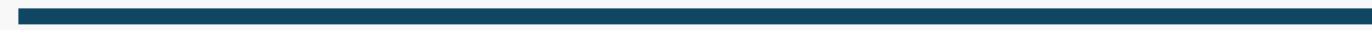
Advanced Functions

- Deep dive to the select elements that make Python Python

Specialization

- Accentuation on Data Science or Web Development

What is Python?

Python is a high-level, versatile programming language known for its simplicity, readability, and extensive libraries, widely used in web development, data science, automation, and machine learning.

Background Insight

Almost as old as C++

Python arrived to the world 6 years after C++

Inspired by the Monty Python Show

Most of the forums show references to the Monty Python Show, the main inspiration for the development of the language

'TIS BUT A SCRATCH!

Clean and Pretty Code

Python code is designed to be as similar as the common english language and as the mathematical language

The Beauty of Python

```python
list=[2,3,4,5,6,8,9,11,13,16,18,19,23,25,27,28]
target = 18
#Iterative Binary Search
def binary_search_iterative(data,target):
    low=0
    high=len(list)-1

    while low <= high:
        middle = (low+high)//2

        if target == list[middle]:
            return True

        elif target < list[middle] :
            high = middle-1

        else:
            low= middle+1

    return False
```

No more curly braces
- Python utilizes indentation instead of curly braces for a more clean look

More readability
- Python has an english-like sintax, making it easier to read over long periods of time

Write less code, do more
- With Python you can write the same code utilizing x5 less lines of code, making you code faster

Let's Try It

Dynamic Typing

With every other programming language such as C++ we must define the type of each variable before we use it, on Python, that's not the case

```cpp
#include <iostream>

int main() {
    int a = 5;
    float b = 3.5;
    char c = 'A';
    bool d = true;
    long e = 1000000000;
    double f = 3.14159265358979323846;
    short g = 10;
    unsigned h = 100;
    long long i = 1000000000000000000;
    unsigned long j = 1000000000;
    return 0;
}
```

```python
1    a = 5
2    b = 3.5
3    c = 'A'
4    d = True
5    e = 1000000000
6    f = 3.14159265358979323846
7    g = 10
8    h = 100
9    i = 1000000000000000000
10   j = 1000000000
```

Let's Try It

Thank you