



Welcome!

Introduction to Python



About Your Instructor



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Emerging Jobs in 2020 (LinkedIn)



#1. Artificial Intelligence Specialist

Hiring growth: 74% annually

Skills: Machine Learning, Deep Learning, TensorFlow, Python, Natural Language Processing

LinkedIn Job postings: 1705 (in the USA)

#3. Data Scientist

Hiring growth: 37% annually

Skills: Machine Learning, Data Science, Python, R, Apache Spark

LinkedIn Job postings: 16468 (in the USA)

Role	AVG Salary (yearly)
Machine Learning Engineer	\$ 141,153
Data Scientist	\$ 123,072

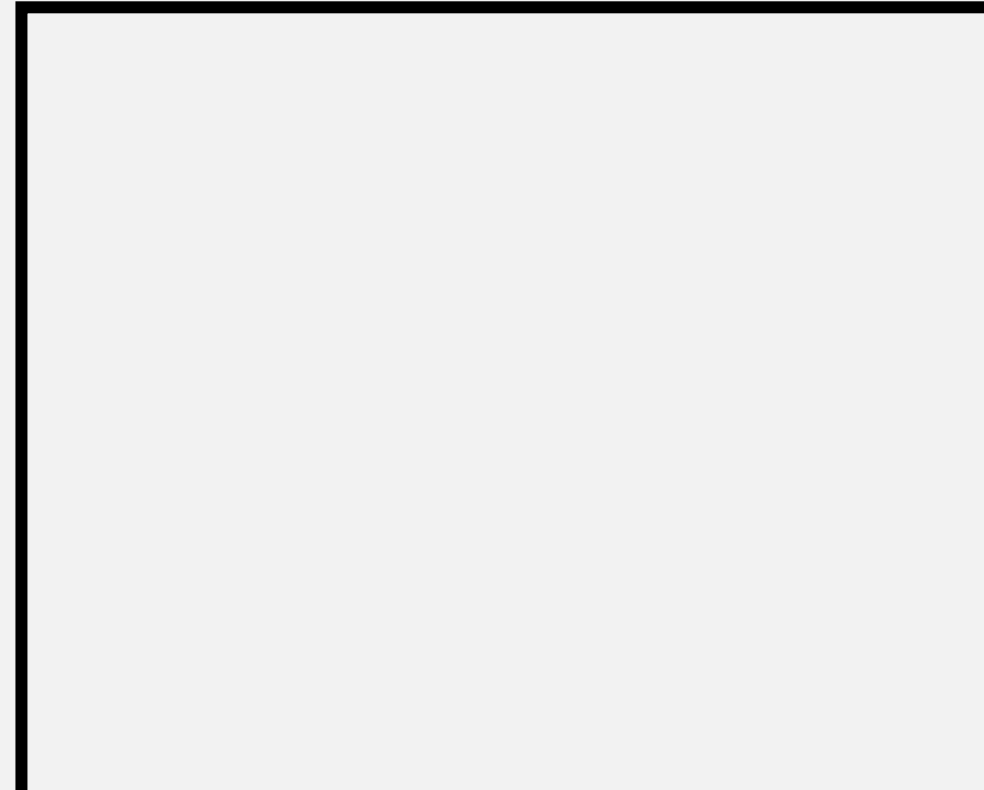
Source: indeed.com

Learning to Code



Just like learning English, **learning a programming language takes time.**

We will progress step-by-step to build up your coding fluency.



Don't be Afraid to Paint



The Art of Coding



Coding is much more of an **art** than a **science**.

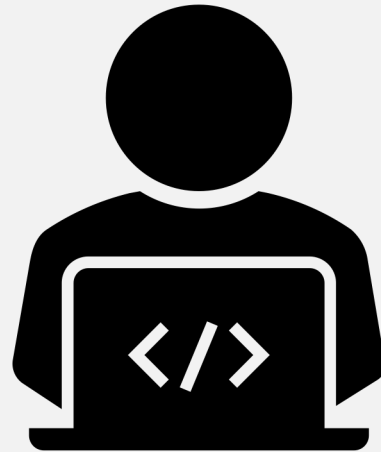
There are **many ways to create art**, no matter what its form.

... and **it takes time** to perfect the vision you are trying to create.



Coding Time!

Our First Program





Printing, User Input, and Escape Sequences

Our First Interactive Programs



Printing

purpose: outputting arguments to the console.

We **rarely** want to print everything. The **print()** command helps us manage what output we would like to display, and what output should be suppressed.

Printing

Essential `print()` syntax

Command	Description
<code>print()</code>	outputs and argument to the console
<code>" "</code>	wrapper to print strings
<code>' '</code>	wrapper to print strings
<code>""" """</code>	wrapper to print strings on multiple lines
<code>f" {var} "</code>	dynamically calls variables/objects into print strings



User Input

Prompting Users

```
Console 1/A x
Python 3.7.3 (default, Apr 24 2019, 15:29:51) [MSC v.1915 64 bit (AMD64)]
Type "copyright", "credits" or "license" for more information.

IPython 7.6.1 -- An enhanced Interactive Python.

In [1]: runfile('C:/Users/mmtel/OneDrive/Documents/HULT/Python/Aula0.py', wdir='C:/Users/mmtel/
OneDrive/Documents/HULT/Python')

Enter your age:
```

input()

purpose: allows us to prompt users to give us input.

We can save this input as a variable and use it later.

This allows for **interactive and dynamic programs**.

input()

```
x = input()
```

A user may have no idea they are being asked to do something.

input()

```
x = input(prompt = "> ")
```

>

```
print(x)
```

> *[prints a user's response]*

input()

```
x = input(prompt = "Response: ")
```

- - - - -

Response:

- - - - -

```
print(x)
```

- - - - -

Response: *[prints a user's response]*

input()

```
user_name = input(prompt = "What's your name? ")  
print(f"Welcome {user_name}!")
```

> What's your name? Python

> Welcome Python!

User Input



Dynamic Response

Dynamic Team Introductions



Mad Fun with Experiential Learning



Mad Lib

A **mad lib** is a writing piece that has blanks in which you insert words in randomly.

answers.com

To make this sandwich, start by first **chopping** (*verb -ing*) the **onions** (*plural noun*) and then spreading them across the bread.

Chopping - verb ending in “ing”

Onions - plural noun

Mad Lib

To make a this sandwich, start by first _____ (*verb -ing*) the
_____ (*plural noun*) and then spreading them across the bread.

- verb -ing -


- kicking

- plural noun -

- sunglasses

We have all the programming skills we need to create
our very own mad libs!

Pumpkin picking

 ***Pumpkin Picking!***

Fall has arrived with a chill in the _____.
(noun)

The leaves are turning _____ and _____.
(color) (color)

Night time comes quicker, which usually
means _____. But today was a _____ day.
(noun) (adjective)

My _____ went to the _____ patch.
(noun) (vegetable)



The _____ took us on a hay _____ to a big
(person) (verb)

_____ field. We all got to pick a _____,
(adjective) (vegetable)

that was _____. Yes night comes quicker now
(adjective)

that it's fall. But tonight my _____ sits
(vegetable)

by my _____. _____ what a _____ day!
(noun) (exclamation) (adjective)



Coding a Dynamic Team Introduction

Use Python to...

- **Instantiate** a user input prompt for each blank space
- Code the story as a dynamic print statement
- Adjust formatting to enhance user experience