



# AI Master Class series – Day 16

## Optical Character Recognition



**5 Shocking Bonus Surprise  
is waiting for you Today –  
Stay Till End**

# Day-16 Agenda.

**01.**

## Label Reading & Methodology

Overview on Label reading &  
Methods to deploy

**02.**

## OCR

Optical Character  
Recognition

**03.**

## Installing OCR

Installing & Configuring Optical  
Character Recognition

**04.**

## Reading Text from Image

Converting Text from Image

**05.**

## Q & A

# Label Reading.

Label-reading skills are intended to make it easier for you to use the Nutrition Facts labels to make quick, informed food decisions to help you choose a healthy diet. Overview | Serving Information | Calories | Nutrients | The Percent Daily Value (%DV) | Nutrition Facts Label Variations.



1. Reading package claims instead of the Nutrition Facts Panel.



3. Ignoring saturated fat or trans fat amounts.



5. Choosing a whole day's supply (50g) of added sugar in one product.

Nutrition Facts	
8 servings per container	
<b>Serving size</b>	<b>2/3 cup (55g)</b>
Amount per serving	
<b>Calories</b>	<b>230</b>
% Daily Value*	
<b>Total Fat</b> 8g	<b>10%</b>
Saturated Fat 1g	<b>5%</b>
Trans Fat 0g	
<b>Cholesterol</b> 0mg	<b>0%</b>
<b>Sodium</b> 160mg	<b>7%</b>
<b>Total Carbohydrate</b> 37g	<b>13%</b>
Dietary Fiber 4g	<b>14%</b>
Total Sugars 12g	
Includes 10g Added Sugars	<b>20%</b>
<b>Protein</b> 3g	
Vitamin D 2mcg	10%
Calcium 260mg	20%
Iron 8mg	45%
Potassium 235mg	6%
* The % Daily Value (DV) tells you how much a nutrient in a serving of food contributes to a daily diet. 2,000 calories a day is used for general nutrition advice.	



2. Not checking calories per serving size.



4. Forgetting to read sodium content.

# Optical Character Recognition.

- Optical character recognition or optical character reader is the electronic or mechanical conversion of images of typed, handwritten or printed text into machine-encoded text, whether from a scanned document, a photo of a document, a scene-photo or from subtitle text superimposed on an image.
- The first step of OCR is using a scanner to process the physical form of a document.
- Once all pages are copied, OCR software converts the document into a two-color, or black and white, version
- The scanned-in image or bitmap is analyzed for light and dark areas, where the dark areas are identified as characters that need to be recognized and light areas are identified as background



## Pattern Recognition & Feature Detection

# Methodology of deploying Label reading.

01

**Google Vision, Amazon Rekognition**  
**PAID**

02

**PyTesseract**  
**FREE**

01

**Custom Training from Scratch with**  
**ROI**

# ! PRACTICAL SESSION !

Label Reading





# Installing Libraries



**Tesseract-OCR Executable:**

**<https://www.pantechsolutions.net/media/attachment/file/t/e/tesseract-ocr-w64-setup-v5.0.0-alpha.20200328.exe>**





# Installing Libraries



**Pytesseract: pip install pytesseract**

```
Successfully built pytesseract
Installing collected packages: pytesseract
  WARNING: The script pytesseract.exe is installed in 'C:\Users\
  Consider adding this directory to PATH or, if you prefer to s
Successfully installed pytesseract-0.3.6
```



# Extracting Text from Image – Pytesseract





```
try:
    from PIL import Image
except ImportError:
    import Image

import pytesseract
pytesseract.pytesseract.tesseract_cmd = r'C:\Program Files\Tesseract-OCR\tesseract.exe'

def recText(filename):
    text = pytesseract.image_to_string(Image.open(filename))
    return text

info = recText('test.png')
print(info)
file = open("result.txt", "w")
file.write(info)
file.close()
print("Written Successful")
```





**Shocking Bonus – I**

**Resume Building**

An abstract background pattern consisting of light gray lines and dots, resembling a circuit board or a network diagram, extending from the left side of the image.

**Shocking Bonus - 2**

**LinkedIn Mastery**



**Shocking Bonus - 3**

**Personal Branding**



**Shocking Bonus - 4**

**Doubt Clarifying Session**



**Shocking Bonus - 5**

**Technical Hackathon**  
-  
**Do It With the Instructor**

**Zoom Classes – Group Coaching**  
**(Same Lectures in the Portal)**



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**BUY 3 COURSE at Rs.999 Only**

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~~Total Value Rs 1,14,000~~

Today Just Rs. 999

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**3 Courses – Artificial Intelligence + Machine Learning + Data Analytics**

**1 Session on Resume Building**

**1 Session on LinkedIn Mastery**

**Personal Branding**

**1 Session on Doubt Clarifying Session**

~~**Total Value Rs 1,14,000**~~

**Today Just Rs. 999**

# Short Bytes — Tech News

## Artificial Intelligence Has a Lot to Learn From Sea Slug, Study Suggests

In sea slugs, there are two signs of intelligence — habituation and sensitization. Habituation means normalizing response to a stimulus over time. Sensitization, however, is quite the opposite. It is the part of intelligence by which an organism strongly reacts to a new stimulus.

AI has often struggled to keep up with these apparently opposite sides of intelligence. Among researchers studying brain-inspired computing, it is known as the “stability-plasticity dilemma.” AI, as we know it today, cannot store new information without first rewriting old data. But habituation would allow AI to not store unnecessary data while sensitization would help retain new information. This would increase stability while also enabling plasticity.



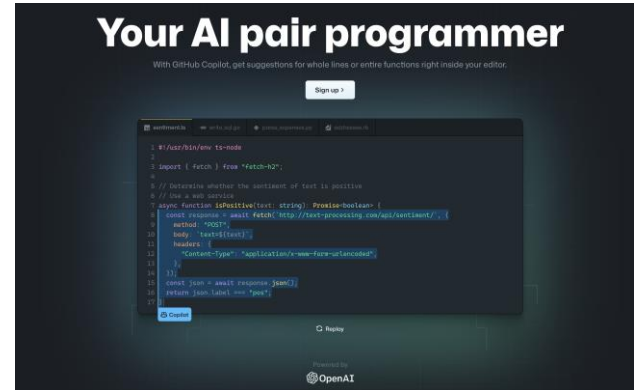
# Short Bytes — Tech News-2

## GitHub releases an AI-powered copilot to help improve code

GitHub is helping developers to speed up and clean up their code with a new AI-powered tool that it calls Copilot.

GitHub Copilot uses an AI system from OpenAI known as OpenAI Codex. The system claims to have a broad knowledge of how people use code and claims to be “significantly more capable than GPT-3” in generating code.

By drawing context from the code that a developer is working on, the system is able to suggest entire lines or functions.





# **Q & A session**



# Thanks!

Connect with me on **LinkedIn:**  
link in Description

Product & Project:  
[www.pantechsolutions.net](http://www.pantechsolutions.net)

Course:  
[Learn.pantechsolutions.net](http://Learn.pantechsolutions.net)

## Tomorrow session

**Smart Attendance System**

