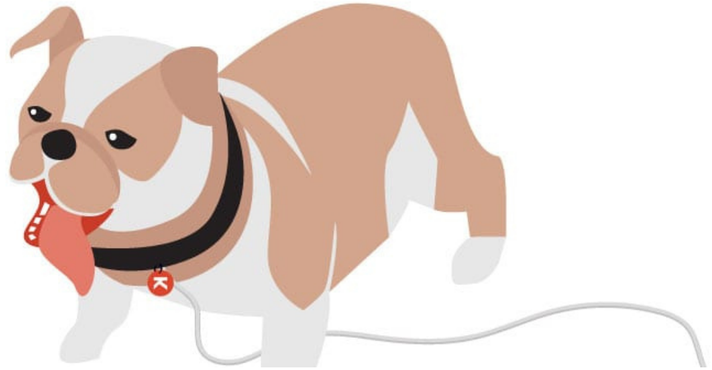
Computer Vision

ANUSTUP MUKHERJEE



I am Computer Vision Engineer DarkHorse INC USA, Former Lead AI Engineer at Omdena , worked with 5 + companies in AI development , Holding Patent and Research on AI ,Former Intern at IIT Patna ,I am a Medical Entrepreneur aiming to create a Better world by my AI Pocket Doctor MBK Health Tech

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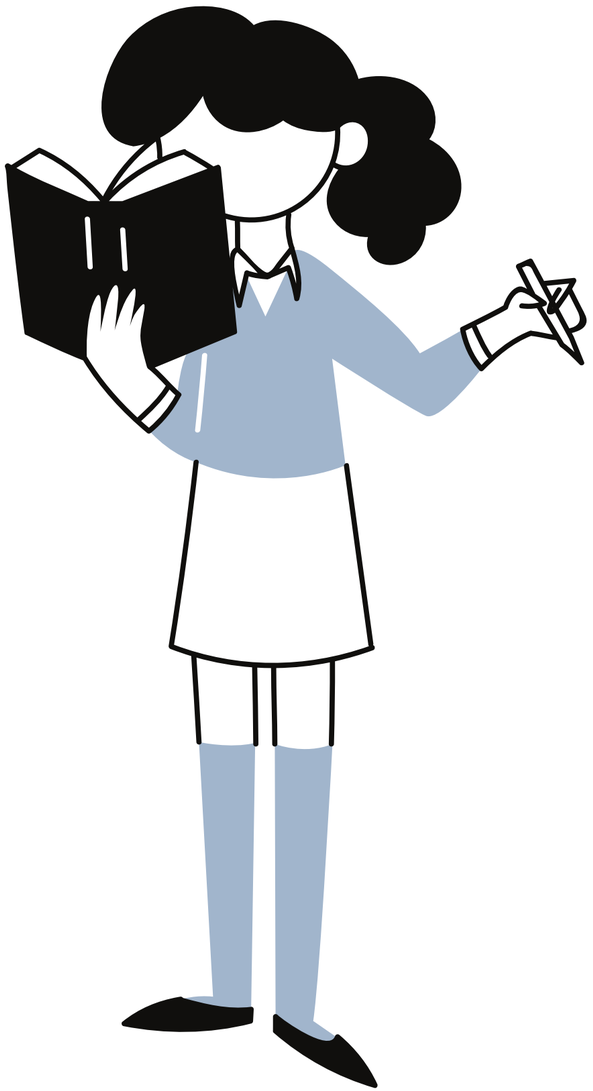
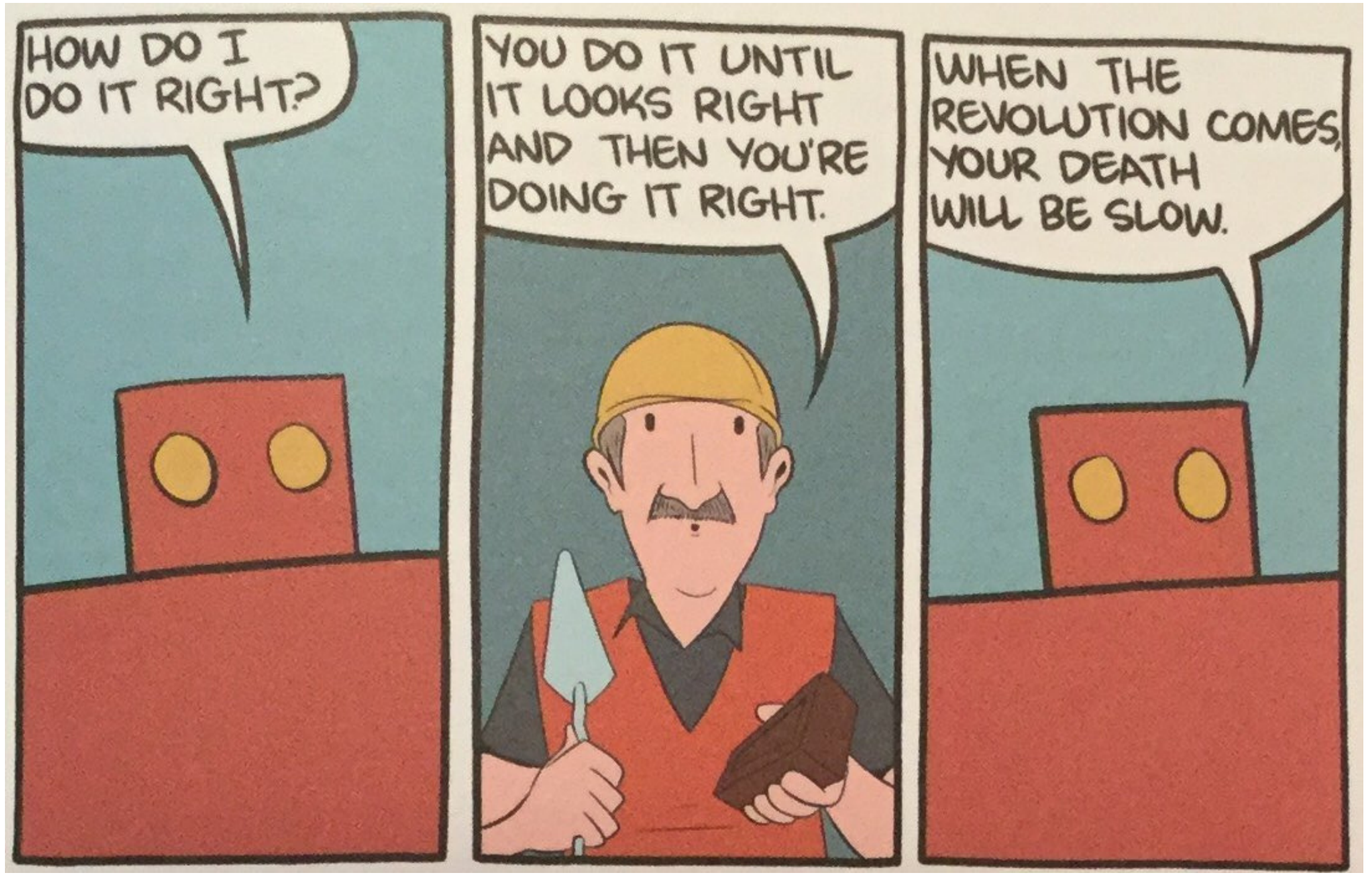


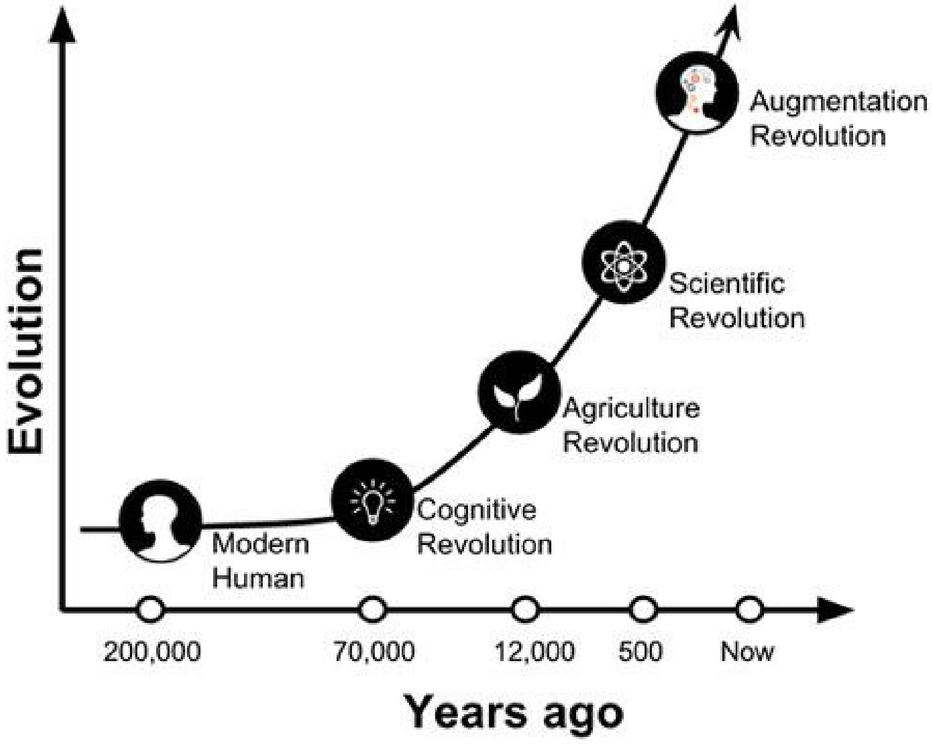
- What is Computer Vision ?
- What are the types in Computer Vision ?
- Computer Vision in Practical eyes
- Brain Mapping to make your own CV
- How to use Computer Vision
- Project Ideas in CV
- Examples of Computer Vision
- Career Map
- Ending Note

A Power where a machine can judge , analyse , detect and recognize by visuals .....adding life to abstracts mimicing human brain and eyes !

Understanding New Generation Computer Vision from- Movarec's Paradox-

"it is comparatively easy to make computers exhibit adult level performance on intelligence tests or playing checkers, and difficult or impossible to give them the skills of a one-year-old when it comes to perception and mobility"

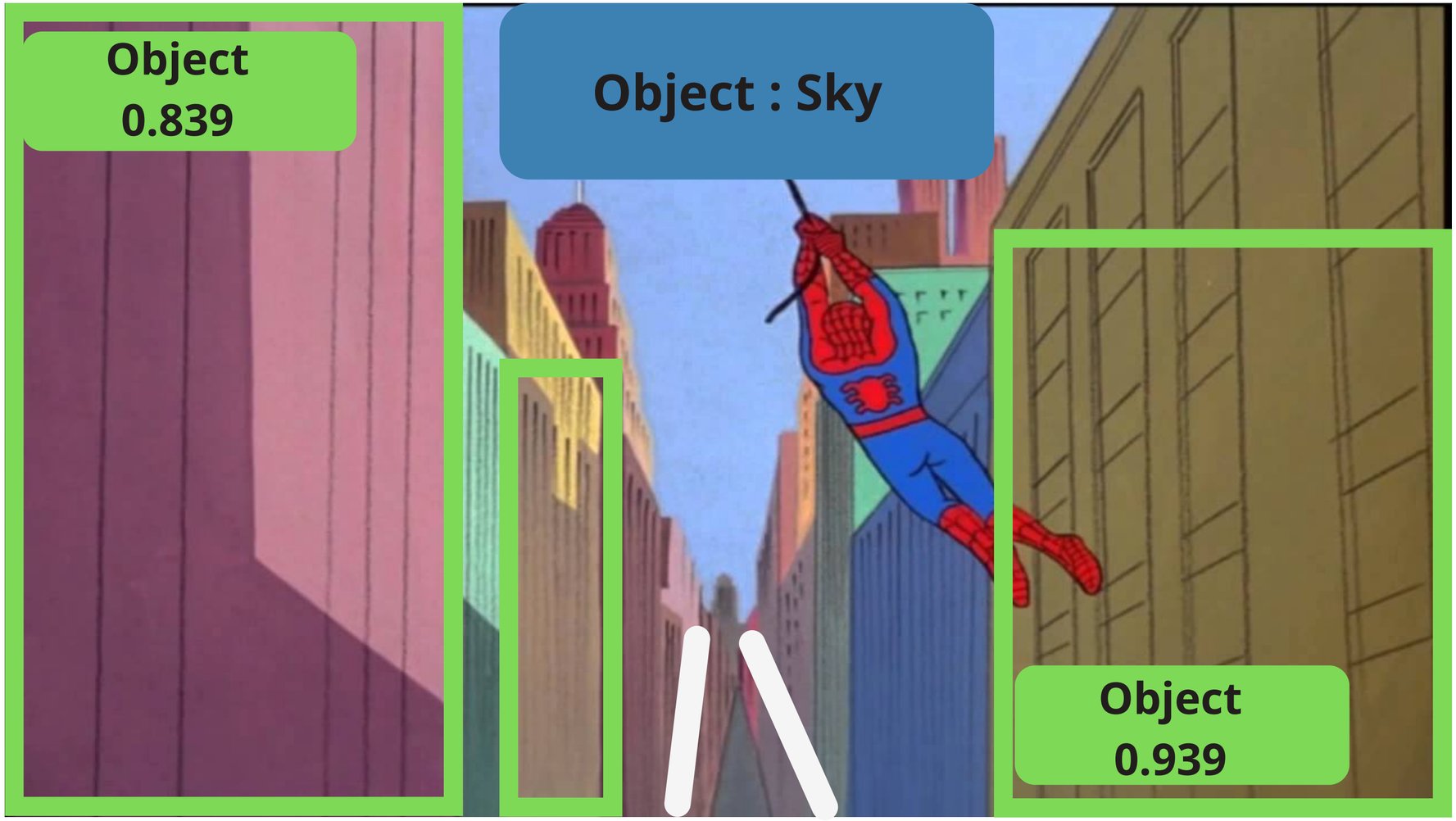


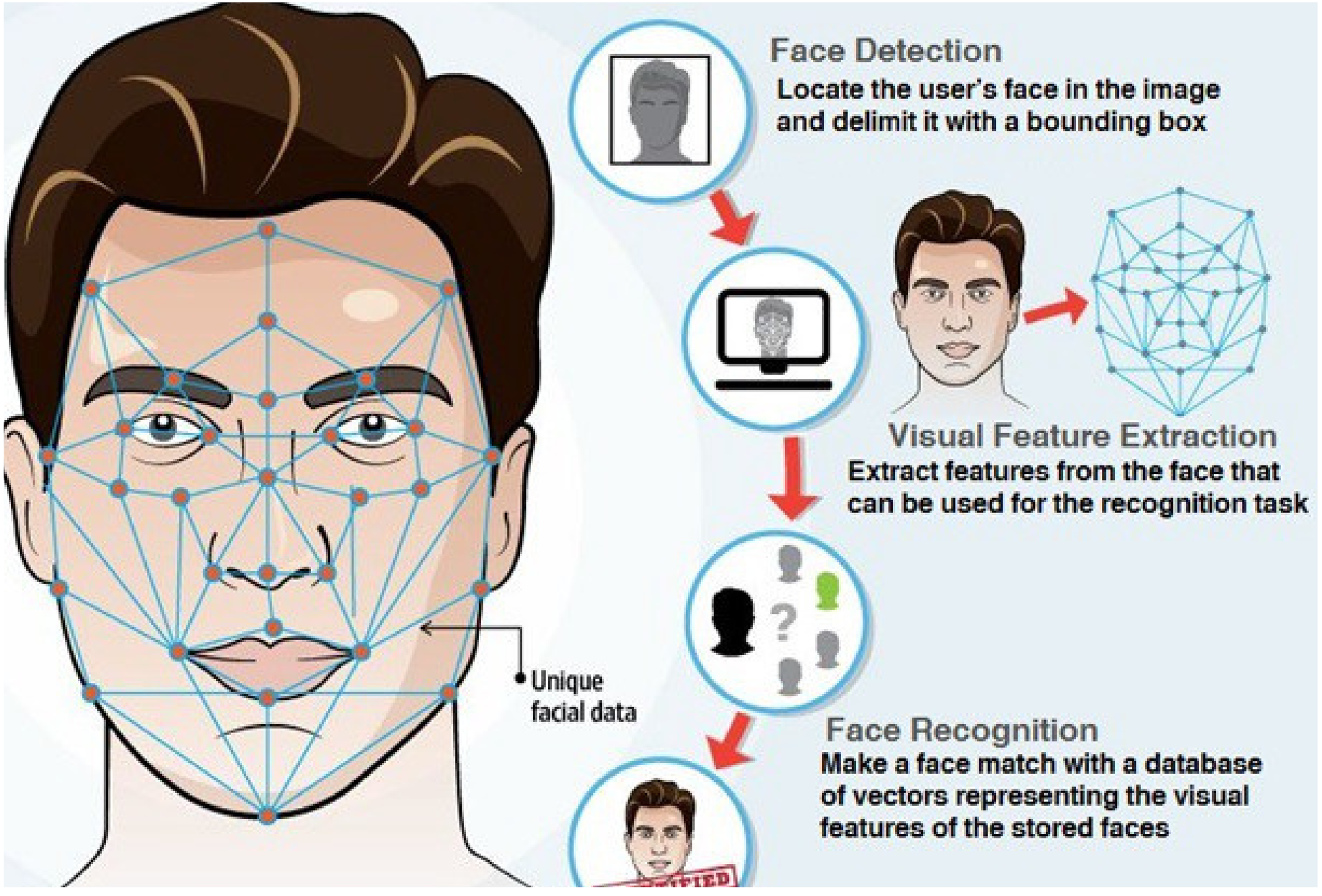


An example of how Computer Vision is growing !!!

Spider Man ------Spider Man

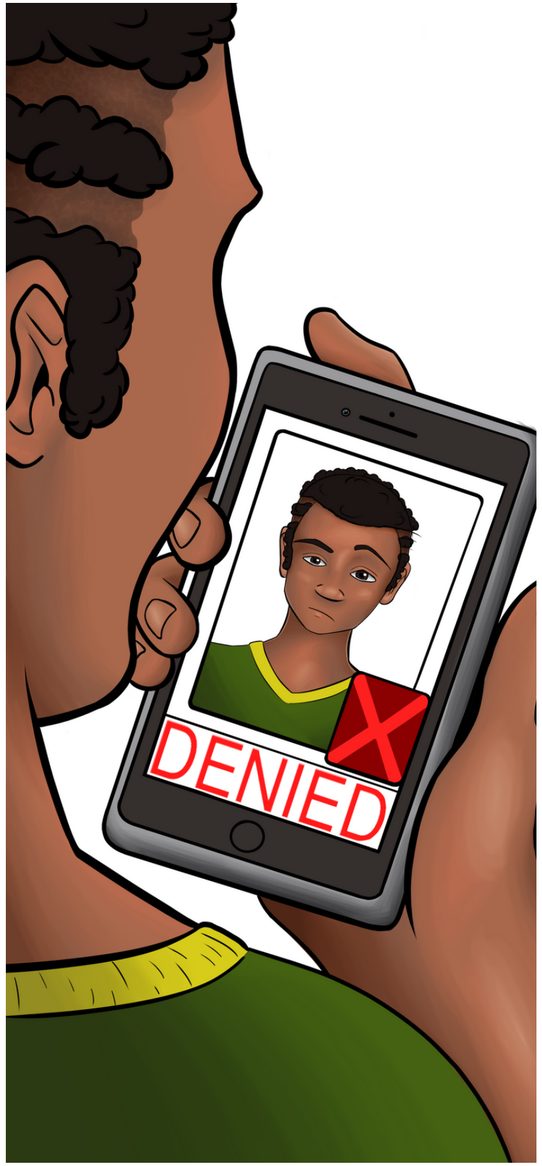
- Object Detection
- Recognition ,Segmentation
- Tracking
- Selection




Face Detection
Locate the user's face in the image and delimit it with a bounding box
Visual Feature Extraction
Extract features from the face that can be used for the recognition task
Face Recognition
Make a face match with a database of vectors representing the visual features of the stored faces
Unique facial data

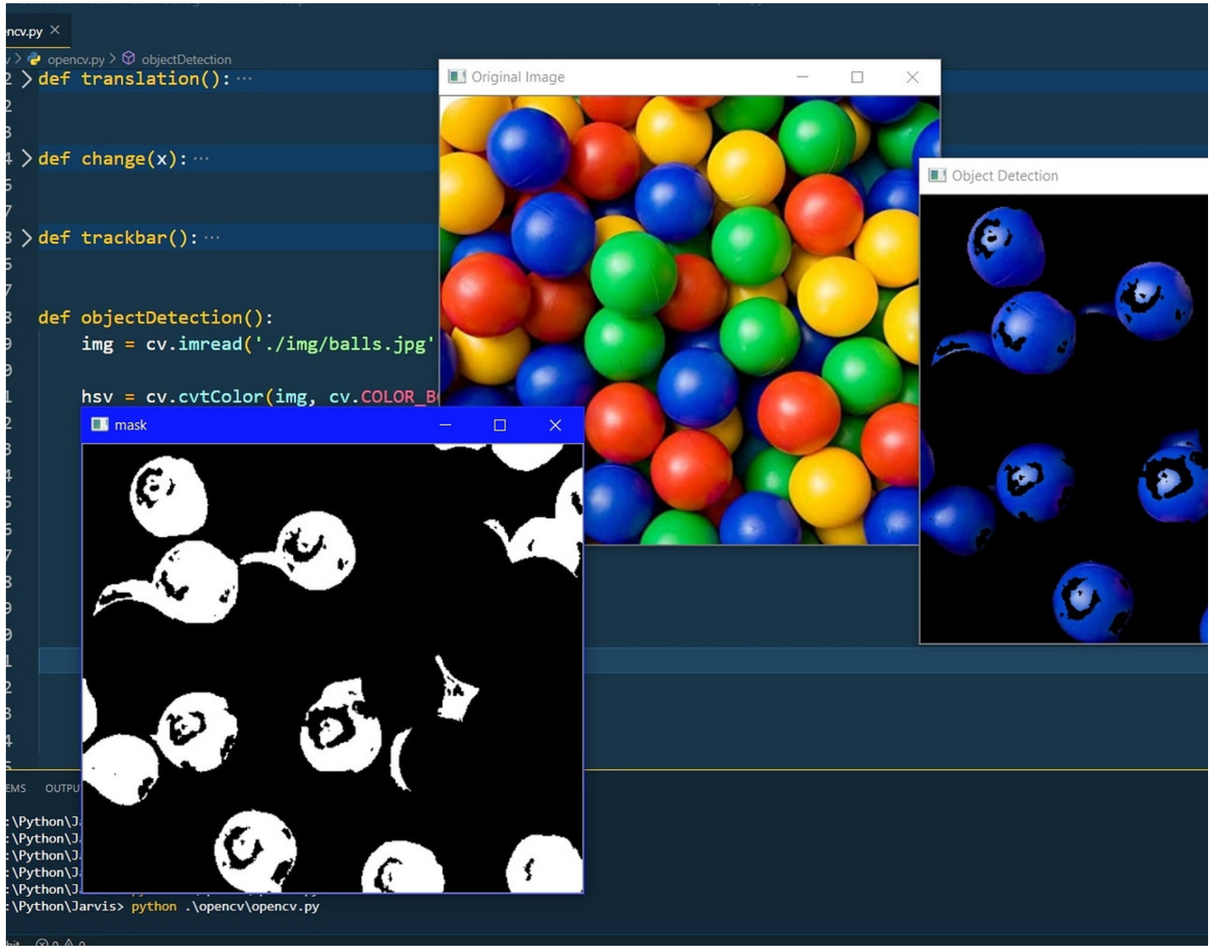
So What are the Problems with the project ?

- Hey what will happen if this person moves at a great speed ?
- What will happen if the person is far enough ? ohh small image !
- What if Facial patterns get changed ?
- What if quality of the input is too poor !



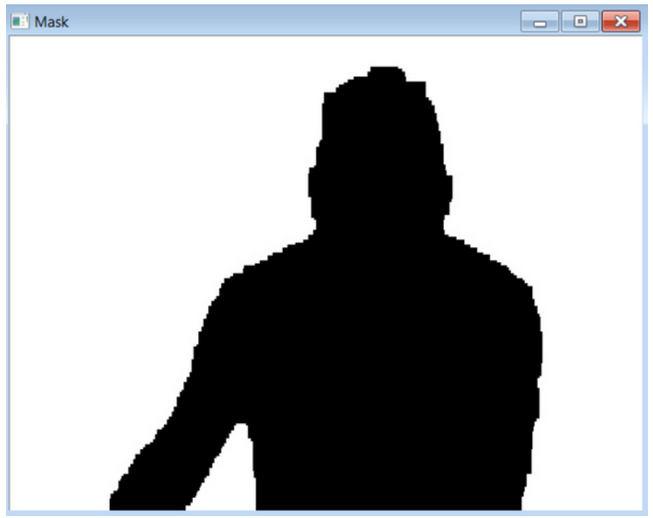
Lets Have a Look on One problem with Traditional Computer Vision !

OPEN CV -- OPEN CV -- OPEN CV



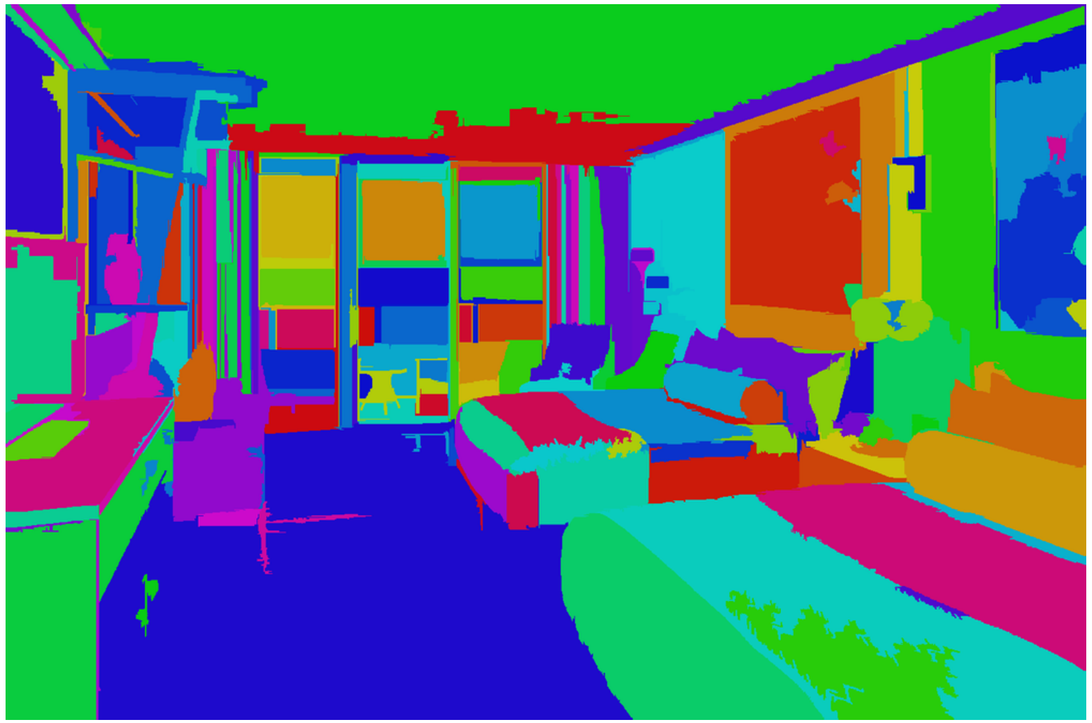
So How does Open CV is Detecting ?

- Power of Corner ,color detection and distribution
- Power of Color ,shape , size analysis empowers
- Working with pretrained models , deep algorithms and much more in Open CV
- Detect the edges to the flow from Masking to the glow is all the Computer Vision

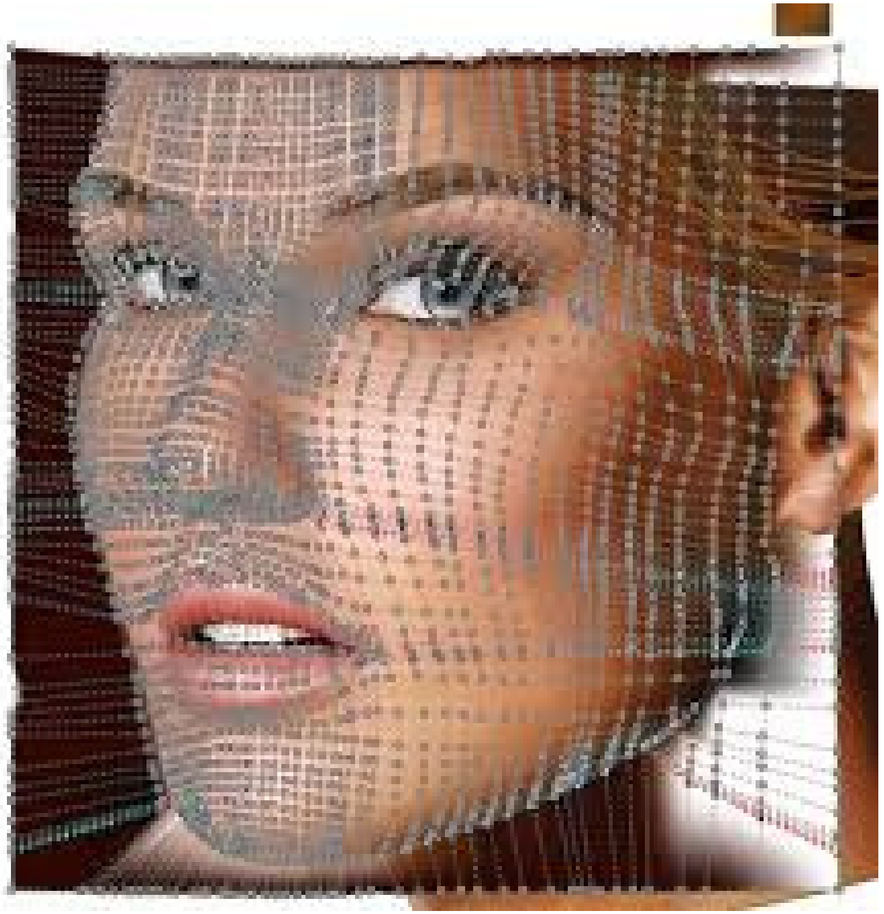


But how to involve more fine tuning with
Speed , time & size ?
Relativity ? Relatively yes

So Lets Use Open CV in advanced
Computer Vision :
Segmentation , Optical Flow , Masking

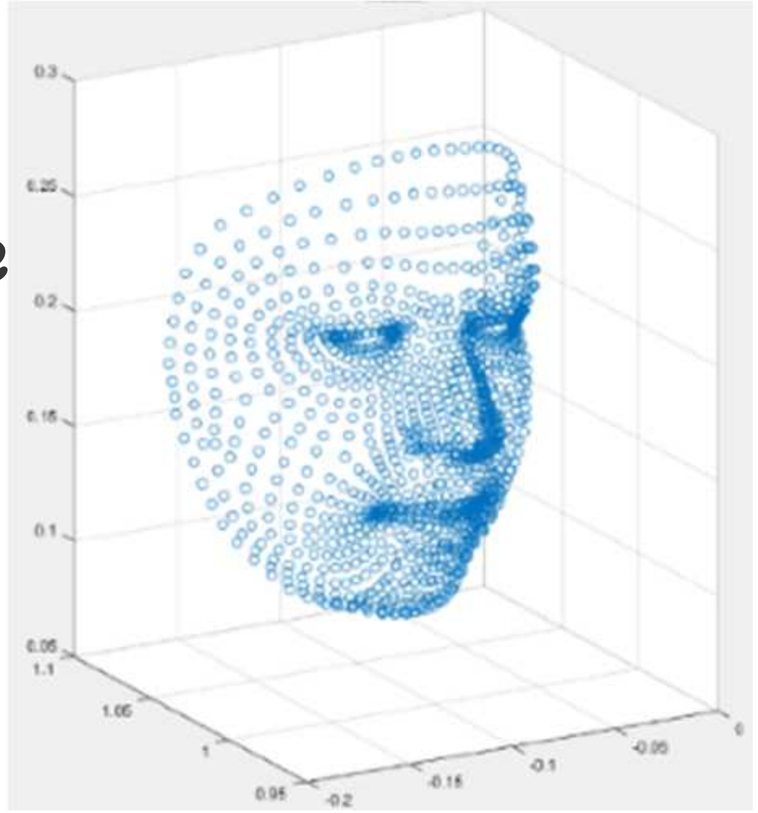


How to Mobilize your Face Recognition by Computer Vision



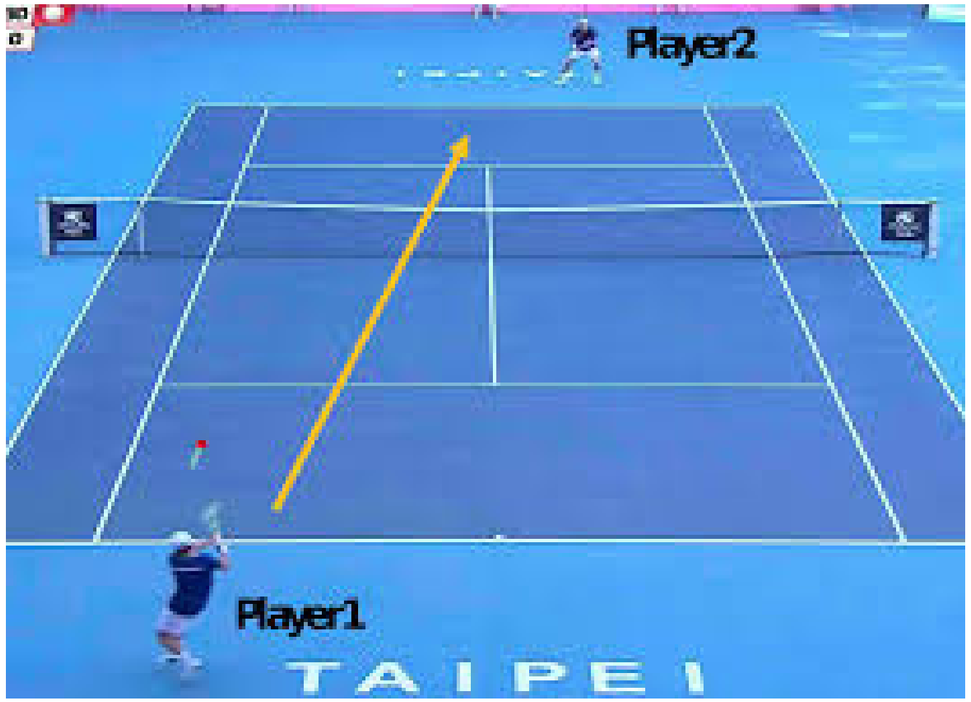
From Open CV to Face Mesh

Tensors play to give the accuracy

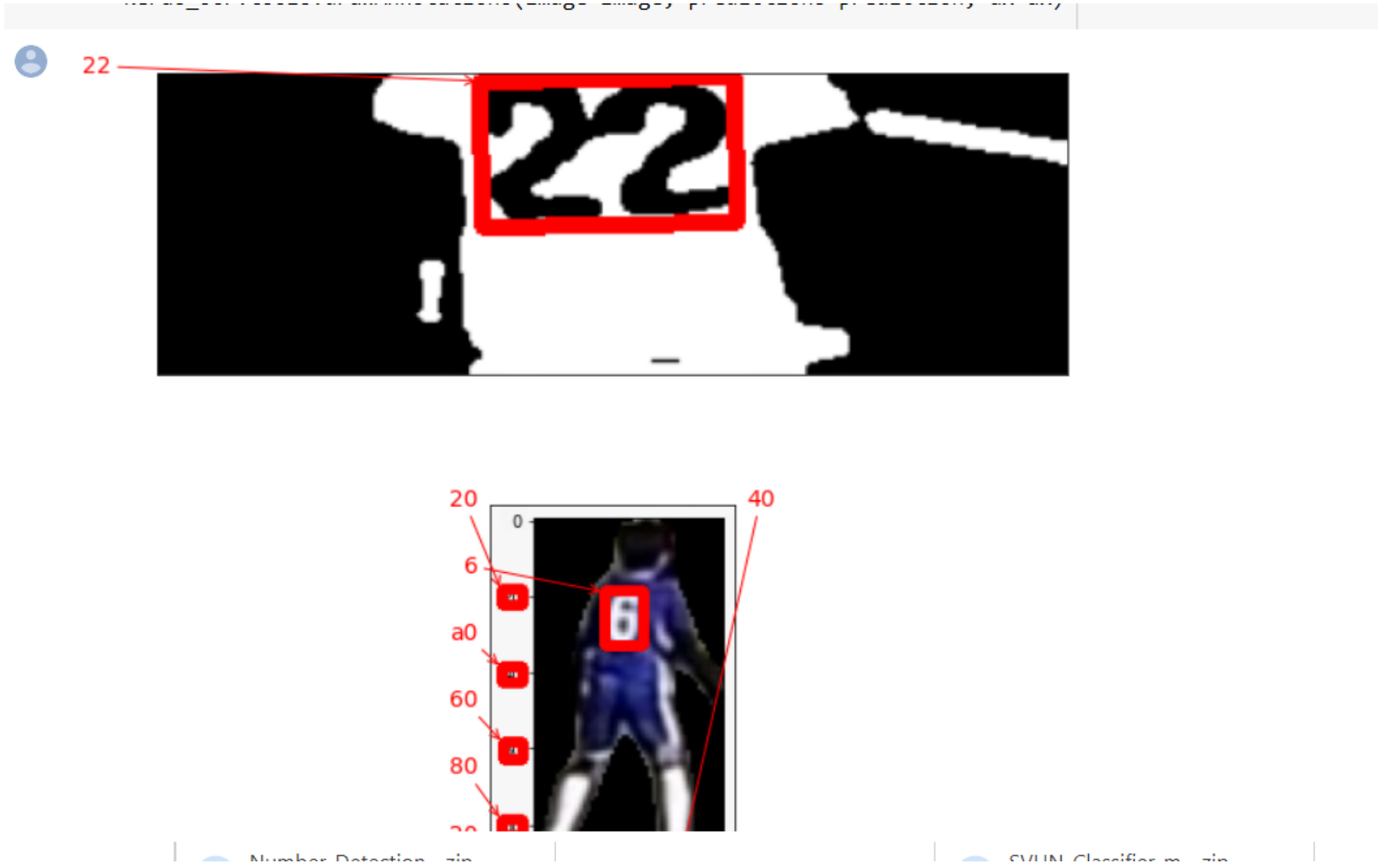


Detectron is Already
Here
to give us a best
Segmentation :
Deep Learning

More Examples :



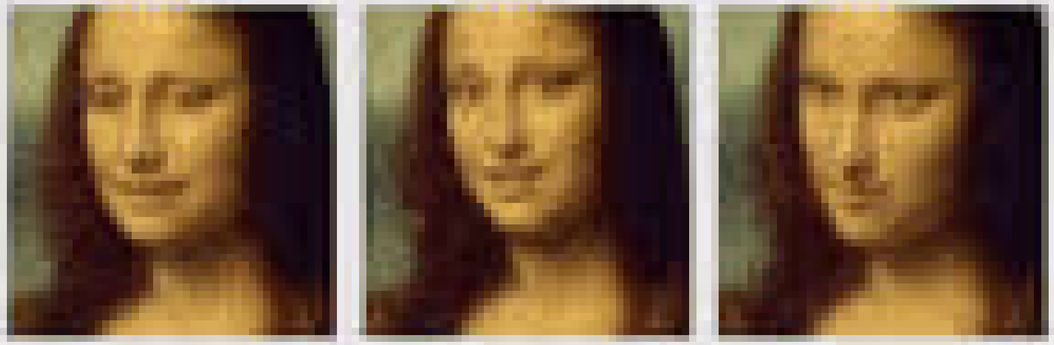
Example of Tracking

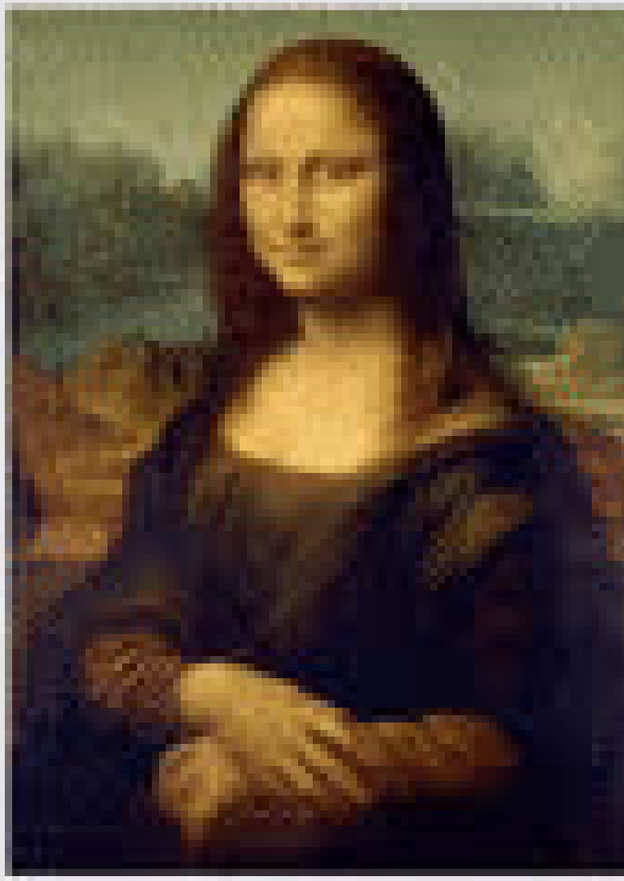


Example of Number Detection

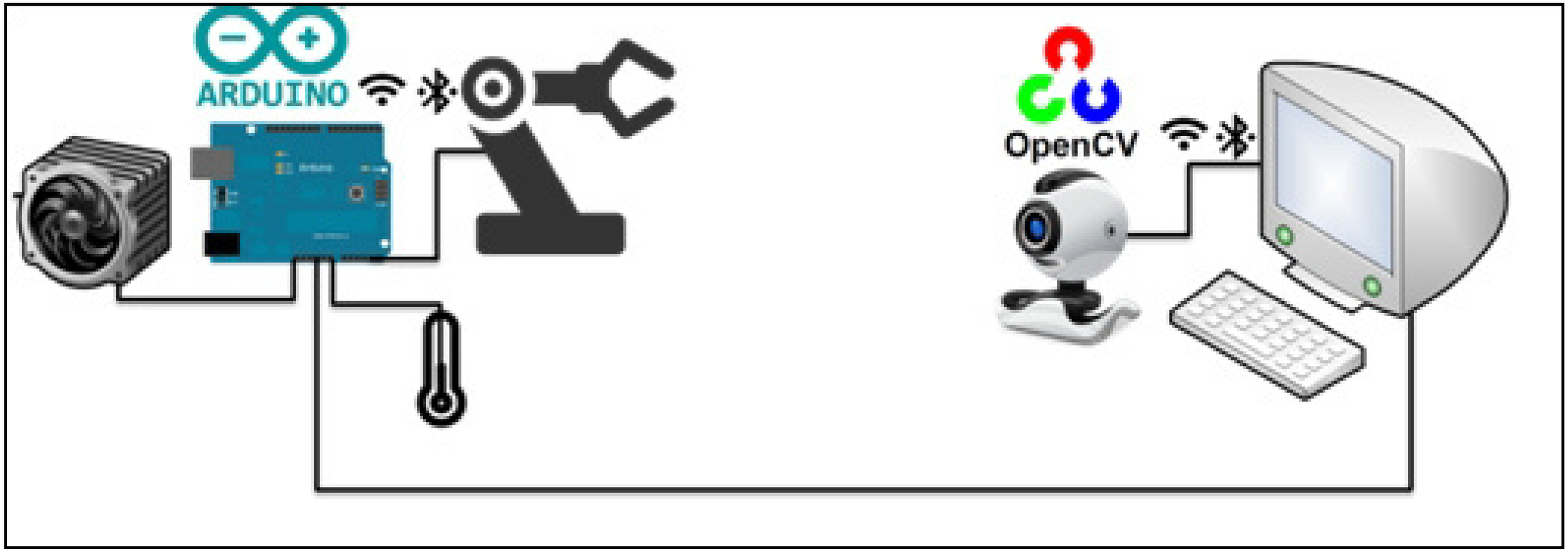
Example of GAN :
Generative Learning

Living portraits





From Software Level to Hardware :
Computer Vision travelling from YOLO ,API's
to Tensorflow ....and now hardware



Most Active Corporate Investors

Company	Embedded Vision/Computer Vision Private Placements		
BMW i Ventures	blackmore SENSORS | ANALYTICS March – 2018 $17.8M	Mapillary March – 2018 $15.0M	may mobility February – 2018 $11.0M
GV	BLUE VISION LABORATORIES March – 2018 $14.5M	magic leap March – 2018 $963.0M	HOVER January – 2018 $25.0M
intel	Chronocam February – 2018 $19.0M	PRECISIONHAWK February – 2018 $75.1M	Horizon Robotics October – 2017 $10.0M
NVIDIA GPU VENTURES	Skydio February – 2018 $42.0M	JingChi 景 | 驰 | 科 | 技 September – 2017 $542.0M	
SAMSUNG SAMSUNG VENTURE INVESTMENT	PERCEPTIN December – 2017	NEARFIELD INSTRUMENTS September – 2017	

And the Future is Here from Virtual Agents to AI Bots

From Generation to Detection

Computer Vision is gonna rule !

Thank you