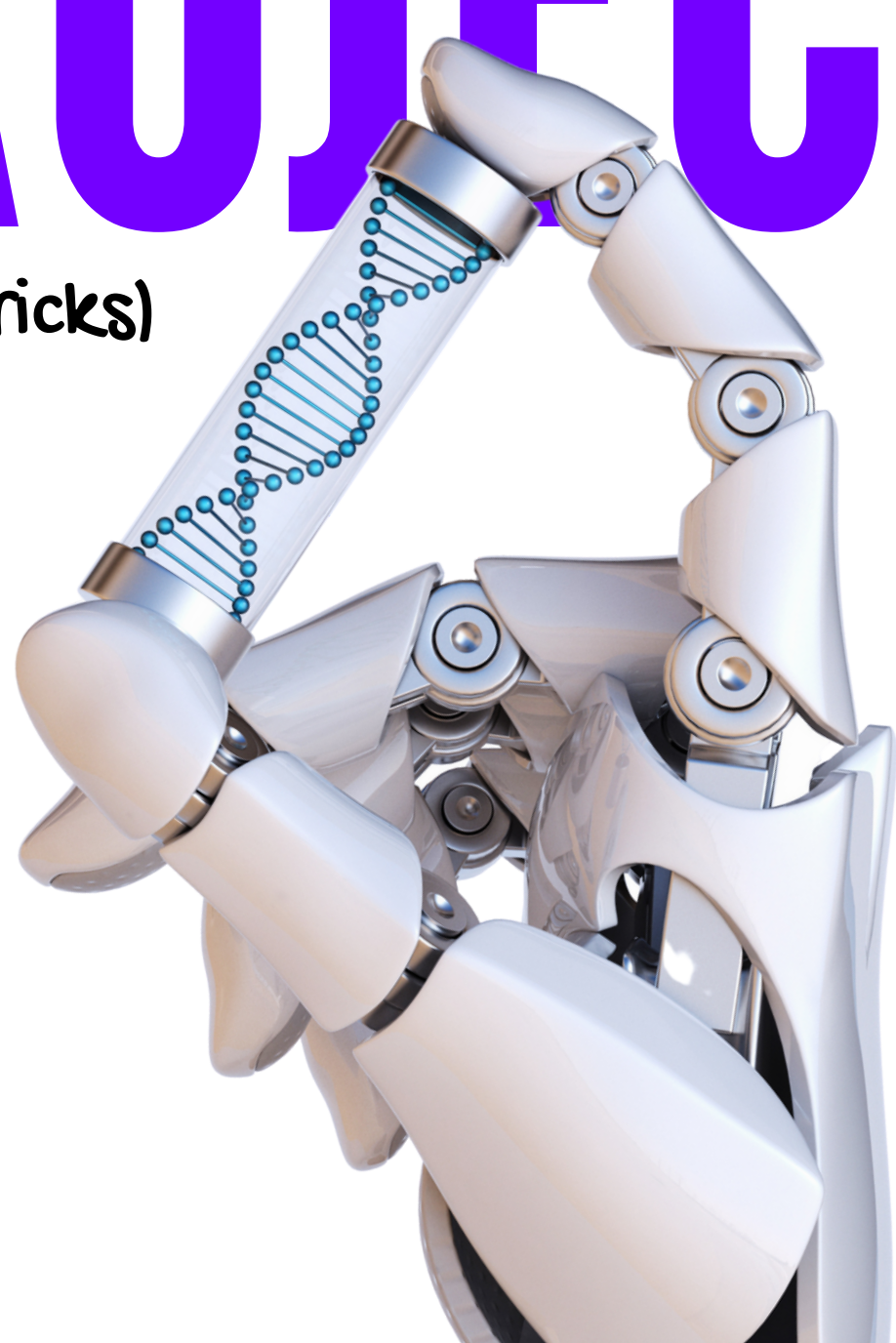
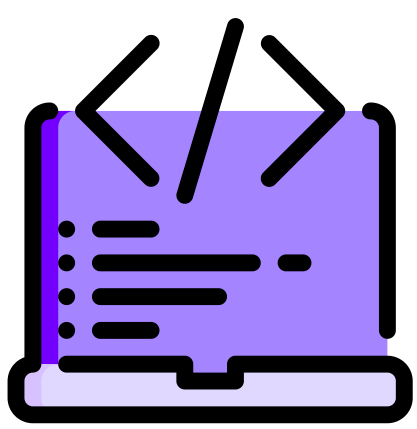
MACHINE LEARNING INDIA

Some interesting

FINAL YEAR PROJECTS

(and Tips + Tricks)





Advanced level projects!

The projects mentioned in this post are advanced level projects, and are meant to help students build some traction for their portfolio. Most of the research papers mentioned, are freely available on **arxiv.org**. Please Google the titles in order to **find** the papers, or to **download** them. The papers will also shed light on the **datasets** used to build the models.

#1: Can machines learn music genres?

Research paper (RP): From Classical To Hip-Hop: Can Machines Learn Genres? by Aaron Kravitz, Eliza Lupone, Ryan Diaz.

#2: Predicting success of songs!

RP: Predicting the Commercial Success of Songs Based on Lyrics and Other Metrics by Angela Xue, Nick Dupoux.

#3: Emotion detection from voice!

RP: Analyzing Vocal Patterns to Determine Emotion by Andy Sun and Maisy Wieman.

#4: Trading strategy development.

RP: Algorithmic Trading Strategy Based On Massive Data Mining by Haoming Li, Tianlun Li and Zhijun Yang.

#5: Who can become an influencer?

RP: Predicting Influencers in a Social Network by Ruishan Liu, Yang Zhao and Liuyu Zhou.

#6: How good is this essay?

RP: Automated Essay Grading by Alex Adamson, Andrew Lamb, and Ralph Ma.

#7: Who's my business competitor?

RP: Strength in numbers: Modelling the impact of businesses on each other by Amir Sadeghian, Hakan Inan and Andres Noetzli.

#8: Where am I?

RP: Landmark Recognition Using Machine Learning by Andrew Crudge, Will Thomas and Kaiyuan Zhu.

#9: Real-time flight path optimization.

RP: Real Time Flight Path Optimization Under Constraints Using Surrogate Flutter Function by Arthur Paul-Dubois-Taine.

#10: Predicting high-risk countries.

RP: Predicting high-risk countries for political instability and conflict by Blair Huffman, Emma Marriott and April Yu.

#11: Segmenting tumors using MRI Scans.

RP: Diagnosing and Segmenting Brain Tumors and Phenotypes using MRI Scans by Samuel Teicher and Alexander Martinez.

#12: What's the optimal time to tweet?

RP: Blowing Up The Twittersphere - Predicting the Optimal Time to Tweet by Seth Hildick-Smith and Zach Ellison.

#13: Personality based on handwriting!

RP: Personality Prediction based on Handwriting using ML by Nikita Lemos, Krish Shah, Rajas Rade, Dharmil Shah.

#14: Brain EEG signal classification.

RP: An end-to-end deep learning approach to MI-EEG signal classification for Brain Computer Interfaces by Hauke Dosea, Jakob S.Mollera, Helle K.Iversenb, Sadasivan Puthusserypadya.

#15: 3D scene generation from text.

RP: Text to 3D Scene Generation with Rich Lexical Grounding by Angel Chang, Will Monroe, Manolis Savva, Christopher Potts and Christopher D. Manning.

#16: Don't break traffic rules!

Speed estimation, automatic detection of helmet and number plate in real time, from CCTV footage. Suggested by: **@chaitu3k**

#17: Enhancing video-quality.

Using GANs to enhance the quality of videos on streaming platforms and to lower the data usage. By: **@0.0ujjwal0.0**

#18: Vision-based inventory system.

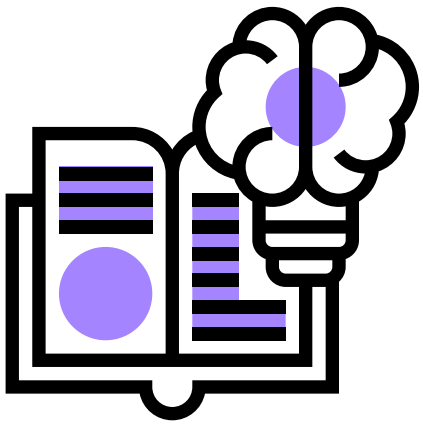
Identifying and updating the stock in inventory using image or video processing. By: **@jayant_uppal**

#19: Personalized workout and diet!

Recommendation of work-out and diet plans based on photos of the body, weight, height, calorie intake, etc. By: **@techiez.ig**

#20: Detecting stress from behavior.

Identifying depression and stress levels based on the analysis of behavior patterns. By: **@manishbajjuri**



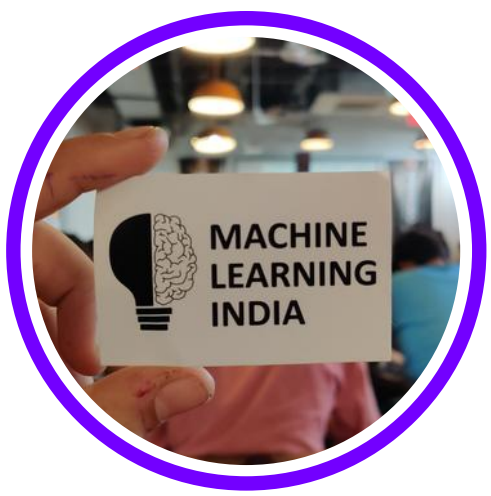
A few tips:

You might not always find '**unique**' project ideas, but you can always give an 'already done project' your own, unique touch.

If somebody has already implemented project **X** using method **Y** on dataset **Z**, you can try to implement the same project using method **P** and dataset **Q**. Hope you get the point!

It is also a great idea to look for interesting datasets, to explore them and then to formulate **your own** project title and goal.

Try to pick projects ideas combining or involving **several academic disciplines** or professional specializations, for example: **banking, finance, marketing, healthcare, education, agriculture, genetics, pharma**, etc. In the end, machine learning is a tool, you apply it to data from various sectors.



Which ideas did you like?

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