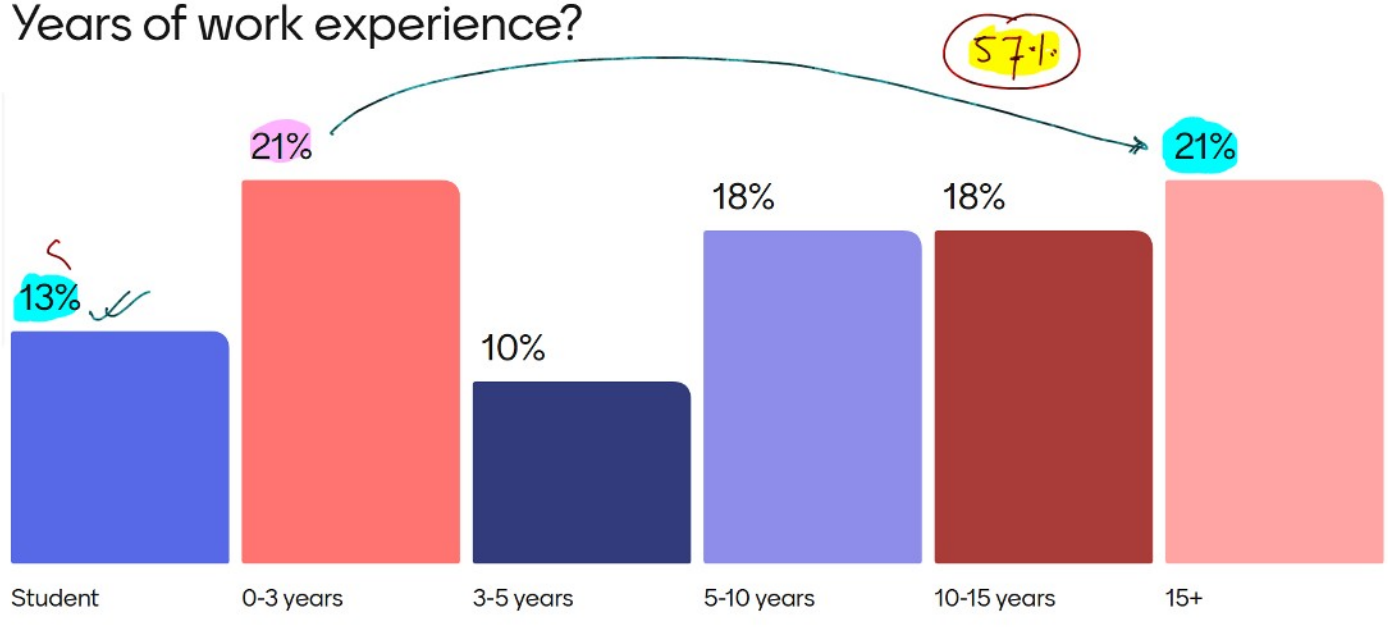
Kick-off

07 September 2025 09:46

What's the end objective for joining this course ?

- upskilling
- career transition
  ↓
  get a job

Years of work experience?



Who am I?

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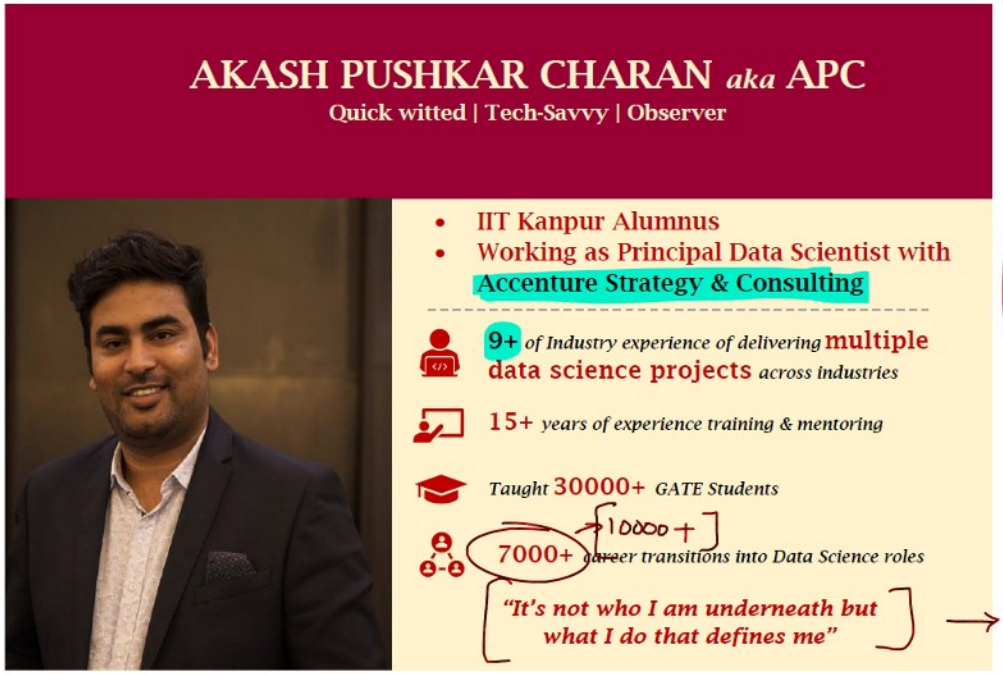

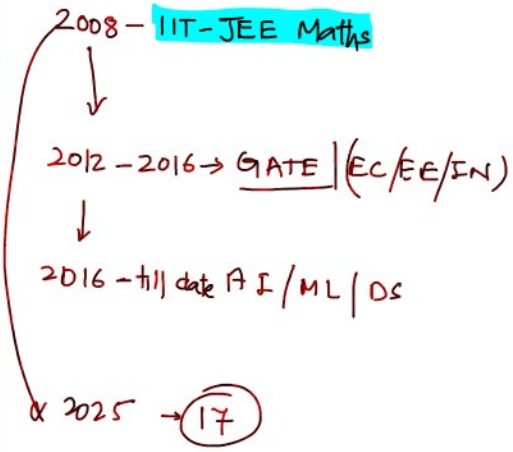

https://www.linkedin.com/in/akash-pushkar-04642925/

How to Become a Data Scientist in 2024 | Data Science Skills, Job Description, Salary | Intellipaat

Setting up guidelines & expectations

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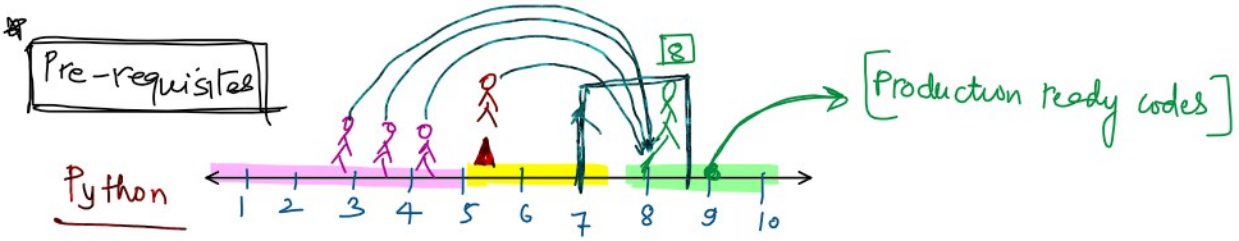
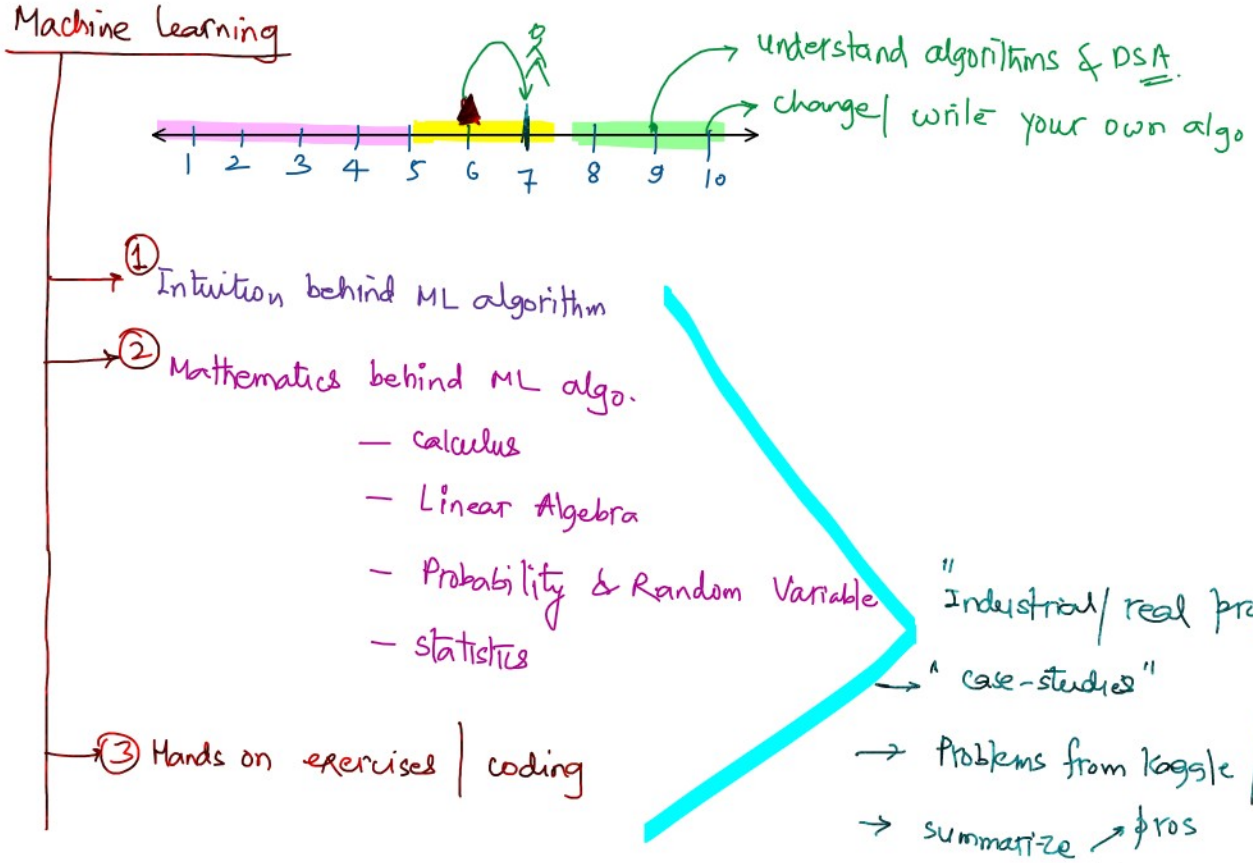


- Basics -
- OOPs -
- Numpy, Pandas, Viz..

Daily → [1hr. of consistent coding]

- [share some resources / materials]
  - APC needs to share.



gtg : "good to go"

Pre-requisites from prior sessions

① Bias and Variance
- overfitting and underfitting

② Gradient Descent Algorithms (GDAs)
- Batch
- Mini-Batch
- Stochastic

* Partially done only for some folks.
↓
Needs to be done — APC.

③ User-defined functions (UDFs) → to mimic any algorithm

④ OOPs Principles

Promise: We'll write our own Neural Network Model by hands
- Excel worksheet
↓
- Python

- OOPs
- NumPy
- Pandas
- Visualization

- zip()
- apply()

- matplotlib
- seaborn
- plotly (resources | materials)

certain Guidelines

① Respect time and money.

② [DO NOT MISS A SINGLE LIVE SESSION.]

Wedding video: A) Once

B) twice

C) thrice

D) more than 4 times

③ Dedicated Doubt Slots (DDS) → after the break (10-15mins)
→ after the session ends (10-15mins)] Talk to me

④ Industry based training

- real world examples
- drop startup ideas
- detailed discussions.

Course Structure

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[8–10 weeks] : Tentative

Module #① Introduction to deep learning (DL)

- Difference b/w ML, DL, AI, GenAI, LLM, Agentic AI, DS, RAG, NLP
- Use cases of DL in the industry
- (domain wise) ↔ examples
  - → Supply chain
  - → Healthcare
  - → BFSI etc.

Module #2 Introduction to Artificial Neural Networks (ANNs)

- connecting the dots between the human nervous system and neural networks } Intuition
- gradient descent algorithms (GDAs)
  - → Batch
  - → Mini-Batch
  - → Stochastic

  } writing our own codes for GDAs leveraging maths.
- Single Layer Perceptron (SLP)
- Multiple Layer Perceptron (MLP)
- Parameters in ANNs
  - → weights
  - → biases
- Activation Functions (AFs)
  - relu, sigmoid, softmax, tanh etc.

Building a proper ANN from scratch.

- using IRIS dataset

Module #③ Neural Network Framework

- Introduction to TensorFlow
- Introduction to Keras

} (sequential Modelling Approach)

MNIST database: Handwritten digits recognition hands on.

Module #④ Convolutional Neural Networks (CNNs)

Module #⑤ Natural Language Processing (NLP)

Module #⑥ Recurrent Neural Networks (RNNs)

Module #⑦ Long short term Model. (LSTM)

- Miscellaneous topics