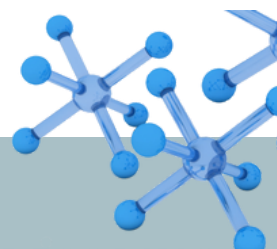
RoadMap to Mastering Generative AI

To develop proficiency in Generative AI, the following 5 skills are essential for a comprehensive understanding and practical application of the field.



1

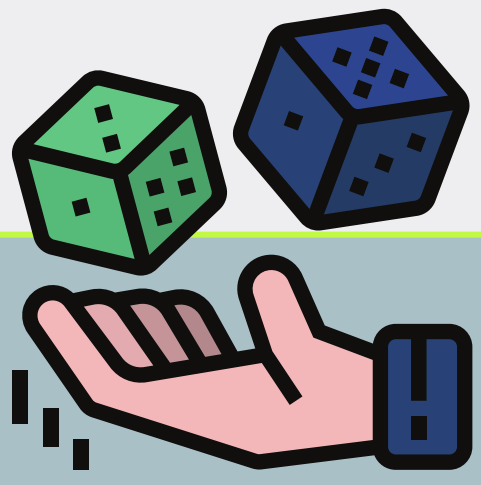
Fundamentals of Machine Learning and Deep Learning:

Understand the basics of machine learning algorithms, such as supervised and unsupervised learning.

Gain knowledge of deep learning concepts, including neural networks, activation functions, and optimization techniques.

Familiarize yourself with common deep learning frameworks like TensorFlow or PyTorch.

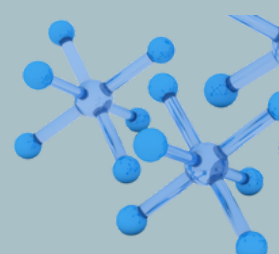
DECODING DATA SCIENCE



Probability and Statistics:

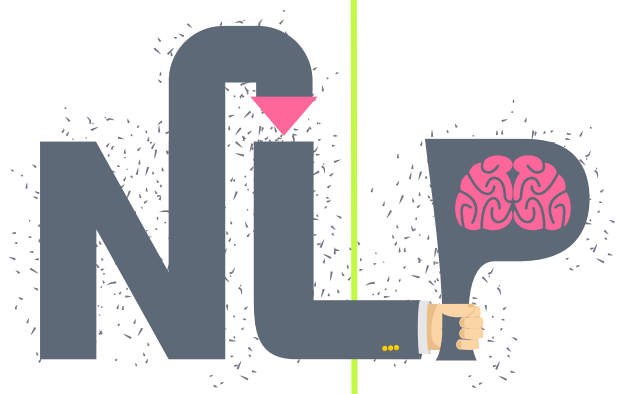
Acquire a strong foundation in probability theory, including concepts like random variables, probability distributions, and Bayesian inference.

Master statistical techniques for data analysis, such as hypothesis testing, regression analysis, and dimensionality reduction.



3

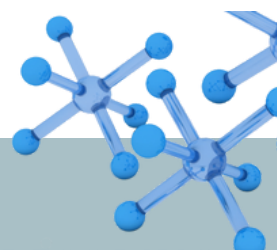
Natural Language Processing (NLP):



Learn the basics of NLP, including tokenization, text preprocessing, and language modeling.

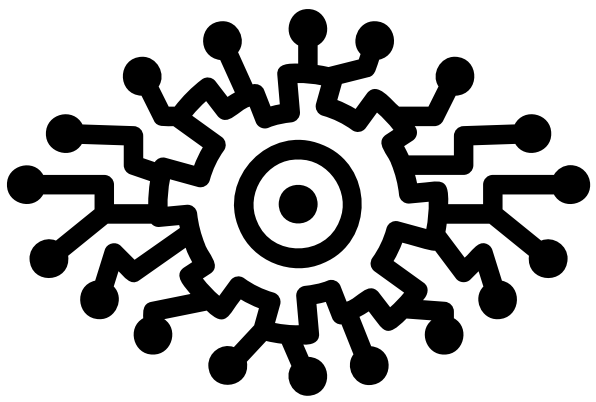
Understand techniques for text generation, such as recurrent neural networks (RNNs) and sequence-to-sequence models.

Explore advanced topics in NLP, such as attention mechanisms, transformer models (e.g., GPT, BERT), and language generation.



4

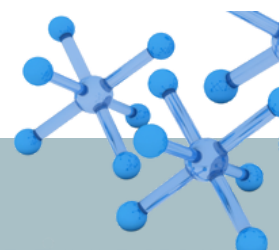
Computer Vision:



Develop a solid understanding of computer vision concepts, including image classification, object detection, and image segmentation.

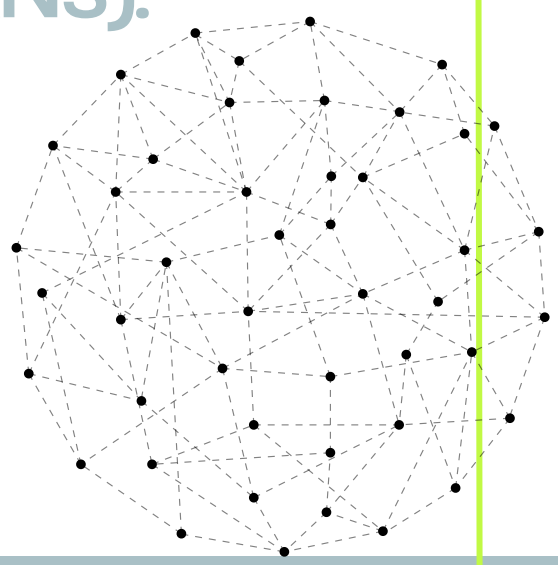
Learn about deep learning architectures for computer vision tasks, such as convolutional neural networks (CNNs).

Gain hands-on experience with popular computer vision frameworks like OpenCV and PyTorch's torchvision.



5

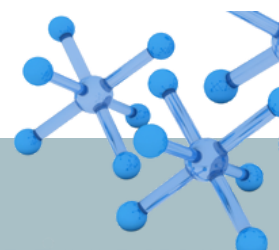
Generative Adversarial Networks (GANs):



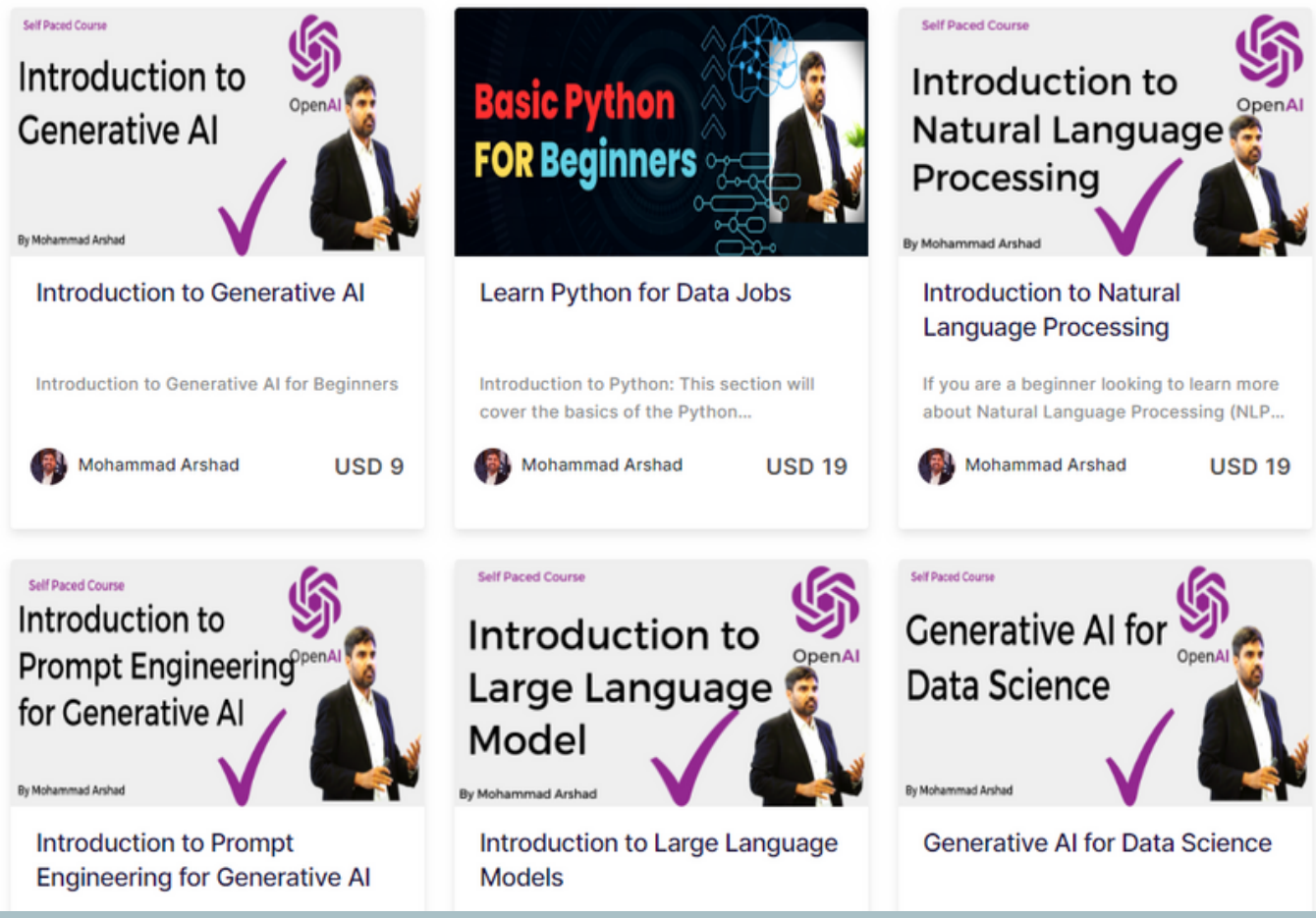
Study the fundamentals of GANs, including their architecture and training process.

Explore various GAN variants, such as conditional GANs, cycle-consistent GANs, and style transfer GANs.

Gain practical experience by implementing GANs for tasks like image synthesis, style transfer, and text-to-image generation.



Generative AI Roadmap for at our academy



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