AI & DATA SCIENTIST ROADMAP

AI CAREER

Attention

This doesn't include:

MLOPS
NLP
GEN AI
Data -Engineering

For above fields the roadmap will be completely different. Also the domain knowledge has to be gained from the respective use-case.

AI Expert Roadmap
Step 1: Maths

1. Algebra
2. Calculus
3. Mathematical Analysis
4. Statistics, including Central Limit Theorem (CLT)
5. Probability and Sampling
6. Hypothesis Testing
7. AB Testing

20 days

AI Expert Roadmap
Step 2: Python/R

1. Data types and structures
2. Control flow
3. Functions and modules
4. NumPy
5. Pandas
6. Matplotlib and Seaborn
7. Statistics basics
8. Machine learning fundamentals
9. Data preprocessing
10. Jupyter Notebooks

20 days

AI Expert Roadmap
Step 3: Understand
ML Lifecycle

1. Problem Definition
2. Data Collection
3. Data Preprocessing
4. Exploratory Data Analysis (EDA)
5. Model Selection
6. Model Training
7. Model Evaluation
8. Model Tuning
9. Deployment
10. Monitoring and Maintenance

1 Day (Just Understand)

AI Expert Roadmap
Step 4: Master
Simple ML Algos

1. Linear Regression
2. Logistic Regression
3. Decision Trees
4. Random Forests
5. Support Vector Machines (SVM)
6. K-Nearest Neighbors (KNN)
7. Naive Bayes
8. K-Means Clustering
9. Principal Component Analysis (PCA)
10. Gradient Boosting Machines (GBM)
11. K-Means
12 DBScan

24 days

AI Expert Roadmap
Step 5: Master
Deep Learning

1. Perceptron
2. Feedforward Neural Networks (FNN)
3. Convolutional Neural Networks (CNN)
4. Recurrent Neural Networks (RNN)
5. Long Short-Term Memory (LSTM)
6. Gated Recurrent Unit (GRU)
7. Autoencoders
8. Generative Adversarial Networks (GAN)
9. Deep Belief Networks (DBN)
10. Transformer Models

30 days