

# ■ 1-Year Roadmap Comparison: ML/AI vs Data Science

Timeline	ML/AI Roadmap	Data Science Roadmap
Months 1–2	Python (numpy, pandas, matplotlib), Math (Linear Algebra, Probability, Stats)	Python (pandas, matplotlib), Stats & Probability, Intro to SQL
Months 3–4	Core ML: Regression, Classification, Clustering, Metrics (AUC, F1, Precision, Recall)	Data Wrangling, Visualization (Tableau/Power BI), Intro to ML
Months 5–6	Deep Learning basics: Neural Networks, CNNs, RNNs, Transfer Learning	ML basics: Regression, Classification, Clustering, PCA, SVM
Months 7–8	Advanced DL: Transfer Learning (ResNet, VGG), NLP with Transformers	Advanced ML: Feature Engineering, Ensemble Methods, XGBoost
Months 9–10	Specialization: Computer Vision, NLP, or Reinforcement Learning	Specializing in ML Projects: Data (Spark), Model Deployment
Months 11–12	MLOps + Deployment: Flask/FastAPI, Streamlit, Docker, Kubernetes	Deployment: Flask/FastAPI, Streamlit, MLOps systems, Cloud (AWS/Azure)