

AI Engineer Roadmap

1. Programming Skills

- Python (NumPy, Pandas)
- ML Libraries (scikit-learn, PyTorch, TensorFlow)
- APIs (FastAPI/Flask)

2. Mathematics

- Linear Algebra
- Calculus (gradients)
- Probability & Statistics

3. Machine Learning Fundamentals

- Regression, Classification
- Trees, Boosting, SVM
- Evaluation metrics

4. Deep Learning

- Neural Networks
- CNN, RNN, LSTM
- Transformers

5. Data Engineering Basics

- SQL
- Data pipelines
- Big Data concepts

6. MLOps & Deployment

- Docker, Kubernetes
- CI/CD
- Model Serving & Monitoring

7. Cloud Skills

- AWS, GCP, Azure basics

8. AI System Design

- Vector Databases
- RAG Pipelines
- Scaling ML Systems