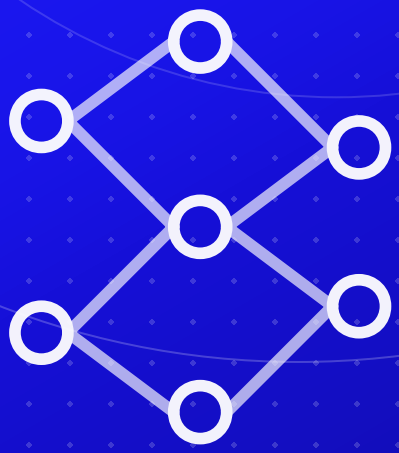
UrbanScholar

PROGRAM BROCHURE

CAREER TRACK · MACHINE LEARNING

MACHINE LEARNING



A rigorous, model-first training track — from regression to ensemble methods to deployment — for learners who want to build ML systems, not just run notebooks.

10–12	8	6	2
WEEKS	MODULES	CAPSTONES	PROGRAM TRACKS

TWO TRACKS · KICKSTART & CAREER

Program Overview

What this track actually builds in you, module by module

Model-first curriculum. Every module builds toward one skill: taking messy real data to a working, evaluated model. By the end, you're not just familiar with algorithms — you've tuned, validated, and shipped several.

Built-in mentorship. Each module closes with a mentor-reviewed checkpoint, so gaps get caught early instead of at the final capstone.

Career layer, not an afterthought. Resume positioning, interview readiness, and aptitude prep run alongside the technical modules — not bolted on in the last week.

Who This Is For

- Students & freshers wanting a rigorous ML portfolio
- Analysts & developers pivoting into ML roles
- Anyone comfortable with basic Python & math

What You'll Walk Away With

- 6 deployable-grade ML projects for your portfolio
- Working fluency in Scikit-learn, XGBoost & model evaluation
- A recruiter-ready resume built around real project outcomes

Program Snapshot

18+ Hrs Live Instructor-Led Sessions

6 Real-World Capstone Projects

8 Structured Learning Modules

Training + Internship Certificate

Mentor-Reviewed Project Checkpoints

Placement & Interview Support

Learning Path

8 modules, sequenced from foundations to deployment

1 · ML Foundations

- Types of ML — supervised, unsupervised, reinforcement
- The ML lifecycle from data to deployment
- Bias-variance tradeoff, intuitively explained

2 · Python & Data Handling

- NumPy & Pandas for data wrangling
- Cleaning messy, real-world data
- Exploratory data analysis (EDA) & visualization

3 · Supervised Learning

- Linear & logistic regression
- Decision trees, random forests, SVM
- k-NN & when simple models win

4 · Unsupervised Learning

- k-means & hierarchical clustering
- PCA & dimensionality reduction
- Choosing the right unsupervised approach

5 · Model Evaluation & Tuning

- Train/test split & cross-validation
- Hyperparameter tuning — Grid & Random Search
- Diagnosing overfitting & regularizing it away

6 · Ensemble Methods

- Bagging vs. boosting, explained practically
- XGBoost & LightGBM in practice
- Feature engineering & selection that actually helps

7 · Introduction to Deep Learning

- Neural network basics
- When deep learning beats classical ML — and when it doesn't
- A first hands-on neural net

8 · ML Deployment

- Model serialization — pickle/joblib
- Serving predictions via Flask/FastAPI
- Monitoring model drift after launch

Tools and Softwares You Can Work With

Py **Python**

NP **NumPy / Pandas**

Sc **Scikit-learn**

XG **XGBoost**

MS **Matplotlib / Seaborn**

FF **Flask / FastAPI**

Capstone Projects

Six builds that turn coursework into a portfolio — 1 of 2

1 · House Price Prediction Model

A regression model that predicts real-estate prices from property features.

SOFTWARE USED

Py Python | Sc Scikit-learn | Pa Pandas

- Engineer features from raw listing data
- Compare linear vs. tree-based regressors
- Evaluate with RMSE & R^2

2 · Customer Churn Prediction

Classify which subscribers are likely to cancel, before they do.

SOFTWARE USED

Py Python | Sc Scikit-learn

- Handle class imbalance correctly
- Compare precision/recall tradeoffs
- Explain predictions with feature importance

3 · Credit Card Fraud Detection

Flag fraudulent transactions in a highly imbalanced dataset.

SOFTWARE USED

Py Python | Sc Scikit-learn | XG XGBoost

- Apply resampling techniques (SMOTE, undersampling)
- Optimize for recall without wrecking precision
- Build a simple real-time scoring function

Capstone Projects

Six builds that turn coursework into a portfolio — 2 of 2

4 · Customer Segmentation Engine

Cluster customers into actionable groups for targeted marketing.

SOFTWARE USED

Py Python Sc Scikit-learn

- Apply k-means with proper feature scaling
- Choose cluster count with the elbow/silhouette method
- Profile & name each segment for marketing use

5 · Movie Recommendation System

A collaborative-filtering recommender that suggests movies based on user behavior.

SOFTWARE USED

Py Python Pa Pandas Sc Scikit-learn

- Build a user-item interaction matrix
- Implement collaborative filtering
- Evaluate recommendation quality

6 · Sales Forecasting Dashboard

Forecast future sales and present it as a live, visual dashboard.

SOFTWARE USED

Py Python Sc Scikit-learn PS Plotly/Streamlit

- Model seasonality & trend in time-series data
- Backtest forecasts against historical actuals
- Wrap the forecast in an interactive dashboard

A Day in the Role

What an ML Engineer's Day Actually Looks Like

- Translate a business question into a modeling task
- Clean & engineer features from raw data
- Train & compare multiple candidate models
- Validate model performance rigorously
- Package & serve models via an API
- Monitor for drift and retrain on schedule

The throughline: every capstone in this brochure is a smaller version of one of these responsibilities — so the portfolio you leave with maps directly to the job you're training for.

Career Outlook

Where an ML skill-set actually leads

ML hiring spans far more than "data scientist" — teams need people who can build, validate, and productionize models across the business, not just explore data.

Role	What They Do	Salary Range (Fresher / Experienced)
ML Engineer	Builds & deploys machine learning models into products	₹6–10 LPA / ₹12–24 LPA
Data Scientist	Models insights from data to guide business decisions	₹5–9 LPA / ₹10–20 LPA
Applied Scientist	Develops ML approaches for specific product problems	₹8–12 LPA / ₹18–30 LPA
ML Ops Engineer	Deploys & maintains ML models in production	₹8–12 LPA / ₹15–25+ LPA
Quantitative Analyst	Applies ML to financial & risk modeling	₹7–12 LPA / ₹15–28 LPA
Business Intelligence (ML-focused)	Builds predictive models for business reporting	₹5–8 LPA / ₹10–18 LPA

Indicative ranges from general India market trends — validate against current job-board data before publishing.

Companies Actively Hiring in This Space

Go Google · Am Amazon · Mi Microsoft · Fl Flipkart · TCS TCS · Wi Wipro

Representative employers in this space — not confirmed UrbanScholar hiring partners.

Program Tracks

Two tracks, same curriculum depth — the difference is placement intensity

KICKSTART

- 14+ hrs live cohort + recorded lectures
- 2 guided projects
- 6 months LMS access
- QR-verified completion certificate
- Mentor support — SLA ≤ 48 hrs
- Resume building workshop
- Mock aptitude test
- Pre-placement orientation session

CAREER

- 20+ hrs live cohort + recorded lectures
- 2 projects + capstone (Minor + Major)
- 6 months LMS access, extendable till placed
- QR-verified + Industry-Readiness certification
- Priority mentor support — SLA ≤ 24 hrs
- Resume + LinkedIn profile building
- 1-on-1 mock interviews with feedback
- Active placement & referral assistance

Common to Both Tracks

All 8 Curriculum Modules

All 6 Capstone Projects

Mentor-Reviewed Checkpoints

Training + Internship Certificate

Where UrbanScholar ML Learners Can Head

Product & Tech Companies

Fintech & Analytics Firms

IT Services & Consulting

Research Labs

Freelance / Independent Consulting

Placement Journey

How career support is woven through the program, not tacked on at the end

1

Build Foundation

Resume & LinkedIn built around real project outcomes, not generic templates.

2

Sharpen Aptitude

Structured aptitude & reasoning practice aligned to actual hiring-test formats.

3

Practice Interviews

Mock interviews with direct, specific feedback — not just a pass/fail score.

4

Get Placement Ready

Soft-skill coaching and, on the Career track, active referral support.

Why this order matters: most programs bolt placement prep onto the last week. Here it runs in parallel with the technical modules, so by the time your capstones are done, your resume and interview readiness are already in place — not started from scratch.

Quick Questions

Do I need prior background to start?

Some familiarity helps, but the early modules — starting with ML Foundations — rebuild the fundamentals from the ground up.

What happens if I fall behind a session?

Every live session is recorded, and mentor SLA windows exist specifically to help you catch up between checkpoints.

Can I switch tracks mid-program?

Yes — Kickstart learners can upgrade to Career at any point by paying the difference, carrying forward completed modules.

Is the certificate recognized by employers?

It's a QR-verified training + internship certificate — employers can verify authenticity directly, not just take it on faith.

UrbanScholar

Industry-Trained. Project-Proven. Career-Ready.

Get In Touch

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PROGRAM

Machine Learning — Kickstart & Career Tracks