UrbanScholar

PROGRAM BROCHURE



CAREER TRACK · AI & EMERGING TECH

ARTIFICIAL INTELLIGENCE

A project-first training track that takes you from Python basics to deployable AI models — built for learners who want proof of skill, not just a certificate.

8–10	8	6	2
WEEKS	MODULES	CAPSTONES	PROGRAM TRACKS

TWO TRACKS · KICKSTART & CAREER

Program Overview

What this track actually builds in you, module by module

Outcome-first curriculum. Rather than teaching AI as isolated theory, this track is sequenced so every concept — Python, math, ML, deep learning, NLP, vision — feeds directly into a project you ship. By the end, you're not just able to explain gradient descent, you've used it.

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 portfolio, not just a course completion badge
- Working professionals pivoting into AI/ML roles
- Anyone comfortable with basic programming logic

What You'll Walk Away With

- 6 deployable-grade AI projects for your portfolio
- Working fluency in TensorFlow, PyTorch & OpenCV
- 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 · Introduction to AI

- Narrow vs. general AI, real-world use cases
- AI ethics & bias — why it matters early
- Environment setup — Python, Jupyter, Anaconda

2 · Python for AI

- Core syntax, data structures, control flow
- NumPy & Pandas for data handling
- OOP patterns used in AI pipelines

3 · Math for AI

- Vectors, matrices, eigenvalues
- Derivatives & gradient descent intuition
- Probability, distributions, hypothesis testing

4 · Machine Learning Foundations

- Regression & classification algorithms
- Clustering & dimensionality reduction (PCA)
- Cross-validation & hyperparameter tuning

5 · Deep Learning

- Activation functions, loss functions, optimizers
- Hands-on with TensorFlow & PyTorch
- CNNs for vision, RNNs/LSTMs for sequences

6 · Natural Language Processing

- Tokenization, TF-IDF, word embeddings
- Sentiment analysis & text classification
- Transformers & working with pretrained LLMs

7 · Computer Vision

- Image preprocessing & augmentation with OpenCV
- Object detection (YOLO/SSD) fundamentals
- Intro to Generative Adversarial Networks

8 · AI in Practice

- Fairness, transparency & responsible deployment
- Serving models with Flask/FastAPI
- MLOps basics — drift monitoring, retraining

Tools and Softwares You Can Work With

Py Python | NP NumPy / Pandas | Sc Scikit-learn | TF TensorFlow

PT PyTorch | OC OpenCV | HF Hugging Face | FF Flask / FastAPI

Capstone Projects

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

1 · Image Classification with CNNs

Train a convolutional network to sort images into categories — the entry point into applied deep learning.

SOFTWARE USED

TF TensorFlow | Ke Keras | OC OpenCV | Py Python

- Work with a labeled image dataset (e.g., CIFAR-10)
- Apply data augmentation to boost accuracy on limited data
- Evaluate using precision, recall & confusion matrix

2 · AI-Powered Chatbot

Build a conversational assistant that parses intent and holds a coherent exchange, not just keyword matching.

SOFTWARE USED

NS NLTK / SpaCy | TO TensorFlow or PyTorch | Py Python

- Design an intent-classification pipeline
- Tune responses using real conversation samples
- Wrap it in a simple web or chat-widget interface

3 · Face Recognition System

A vision system that detects and matches faces — the same core technique behind attendance and access-control tools.

SOFTWARE USED

OC OpenCV | Dl dlib | TF TensorFlow | Py Python

- Build or source a facial-image dataset responsibly
- Train a CNN-based recognition/matching model
- Apply it to a mock attendance or access-log use case

Capstone Projects

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

4 · AI-Based Resume Screener

An NLP tool that scores resumes against a job description — the kind of internal tool real hiring teams use.

SOFTWARE USED

Py Python | SC SpaCy | Sc Scikit-learn

- Extract skills & entities from unstructured resume text
- Score candidate-JD fit with similarity models
- Output a ranked shortlist with match reasoning

5 · Text Summarization Tool

Condense long documents into short, faithful summaries — a practical NLP skill in high demand for content and research tooling.

SOFTWARE USED

Py Python | HF Hugging Face Transformers

- Implement both extractive and abstractive approaches
- Benchmark summary quality against the source text
- Package as a simple tool accepting text or a URL

6 · Smart Surveillance Alert System

A vision pipeline that watches a video feed and flags unusual activity in near real time.

SOFTWARE USED

OC OpenCV | TF TensorFlow | Py Python

- Process video frame-by-frame for motion/object anomalies
- Apply a trained model to flag suspicious activity
- Trigger a real-time alert (email/notification)

A Day in the Role

What an AI Engineer's Day Actually Looks Like

- Translate a business problem into a solvable AI task
- Clean, label, and transform messy real-world data
- Build & train models with TensorFlow, PyTorch, OpenCV
- Tune for accuracy, fairness, and interpretability
- Ship models via REST APIs, containers, or the cloud
- Track drift and retrain as real-world data shifts

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 AI skill-set actually leads

AI hiring in India has shifted from a handful of research roles to a broad band of applied positions — teams now need people who can build, ship, and maintain models, not just prototype them.

Role	What They Do	Salary Range (Fresher / Experienced)
AI Engineer	Builds intelligent systems for automation & prediction	₹6–10 LPA / ₹12–25 LPA
Data Scientist	Models insights from data using ML & statistics	₹5–9 LPA / ₹10–20 LPA
NLP Engineer	Builds chatbots, translation & speech tools	₹4–8 LPA / ₹9–15 LPA
Computer Vision Engineer	Builds systems that interpret images & video	₹6–10 LPA / ₹12–20 LPA
AI Research Scientist	R&D on next-generation AI algorithms	₹6–10 LPA / ₹15–30 LPA
MLOps Engineer	Deploys & maintains AI models in production	₹8–12 LPA / ₹15–25+ LPA

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

Companies Actively Hiring in This Space

Go Google | Mi Microsoft | Am Amazon | NV NVIDIA | TCS TCS | In Infosys

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 AI Learners Can Head

Product & Tech Companies | **AI/ML Startups** | **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 Introduction to AI — 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

Artificial Intelligence — Kickstart & Career Tracks