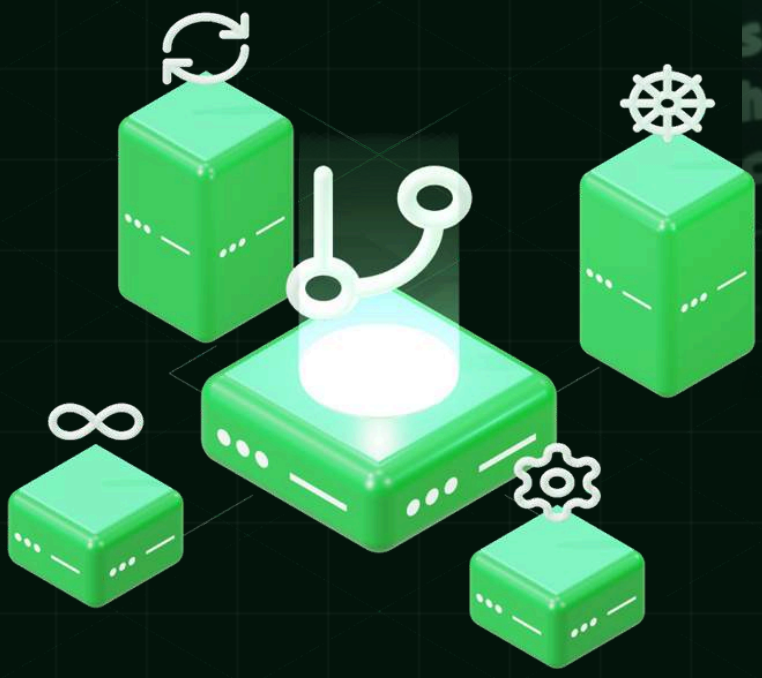
samcommunity.in

✦ DEVOPS & PLATFORM ENGINEERING · ADVANCED

ArgoCD & GitOps

Git as the source of truth.



48
HOURS

8
MODULES

SAM-ARGOCD
CERTIFICATION

SAMCOMMUNITY ACADEMY

academy@samcommunity.in

samcommunity.in

✦ INSIDE THIS BROCHURE

Contents

Program overview 03

Who it's for 04

Learning outcomes 05

Program runway 06

Detailed curriculum 07

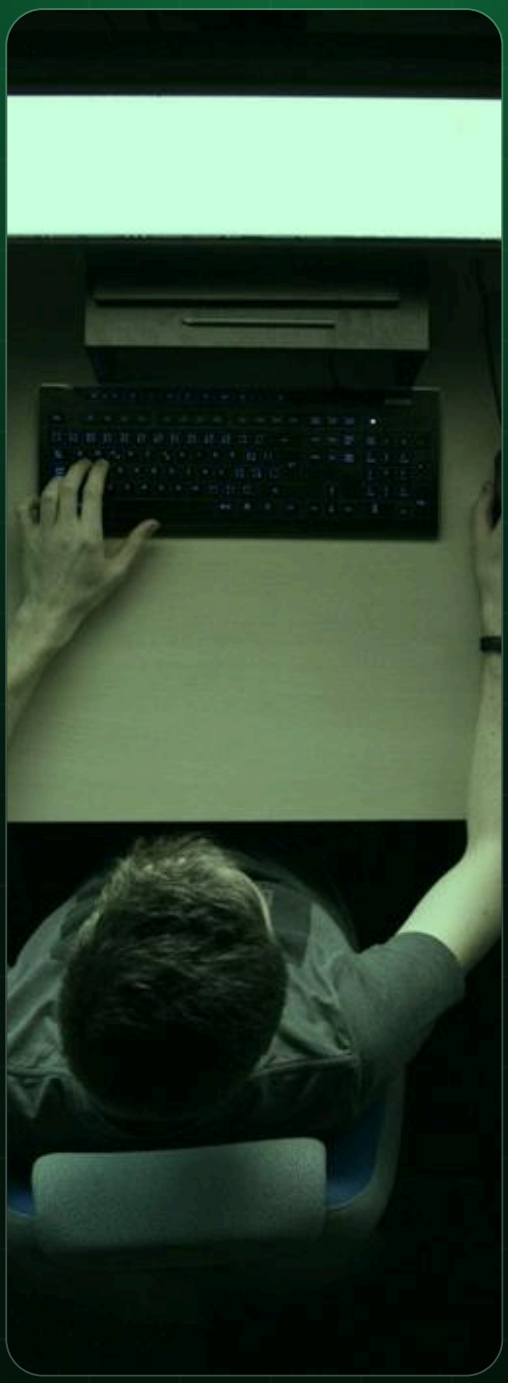
Tools & platforms 10

Projects & capstone 11

Certification & method 12

Learning path 13

FAQs 14



AT A GLANCE

Level	Advanced
Duration	48 Hours
Modules	8
Certificate	SAM-ARGOCD

✦ PROGRAM OVERVIEW

Git as the source of truth.



Deliver applications to Kubernetes with GitOps and Argo CD.

As Kubernetes estates grow, teams need deployments that are auditable, repeatable and easy to roll back. GitOps makes Git the single source of truth and lets controllers continuously reconcile clusters to it. This advanced program teaches GitOps principles and Argo CD in depth, including multi-environment repository design, ApplicationSets, sync strategies, secrets, progressive delivery with Argo Rollouts and multi-cluster operations.

LEVEL	DURATION	CERTIFICATION	DELIVERY
Advanced	48 Hours	SAM-ARGOCD	Instructor-led · Live virtual · Blended



✦ WHAT YOU'LL PRACTISE

Understand GitOps principles	01
Deploy apps with Argo CD	02
Manage environments declaratively	03
Roll back safely	04

✦ WHO IT'S FOR

Built for people ready to grow.

01

Developers & sysadmins

DevOps, Linux and Git foundations

02

DevOps engineers

Docker, Kubernetes, Terraform, CI/CD

03

Platform teams

GitOps, Helm, Backstage, observability

04

Reliability leads

SRE practices and DevSecOps

PREREQUISITES

Solid hands-on Kubernetes experience	01
Familiarity with Helm or Kustomize	02
Working knowledge of Git and CI/CD pipelines	03

ROLES YOU CAN TARGET

- DevOps Engineer ↗
- Platform Engineer ↗
- Kubernetes Engineer ↗
- Site Reliability Engineer ↗
- Release Engineer ↗

✦ LEARNING OUTCOMES

What you'll be able to do.

01 Explain the four OpenGitOps principles and pull-based delivery

02 Install, configure and secure Argo CD for teams

03 Deploy applications using Helm, Kustomize and plain manifests

04 Manage many environments and clusters with ApplicationSets

05 Handle secrets safely in GitOps repositories

06 Implement canary and blue-green releases with Argo Rollouts

HOURS PER MODULE



✦ PROGRAM RUNWAY

Your journey, module by module.

8
MODULES · 48 HRS

01	**GitOps Principles** OpenGitOps principles, Push versus pull deployment models, Reconciliation loops and drift	4 hrs
02	**Argo CD Fundamentals** Argo CD architecture, Installing Argo CD, Application custom resources	7 hrs
03	**Manifests, Helm and Kustomize** Plain YAML manifests, Helm charts in Argo CD, Kustomize bases and overlays	7 hrs
04	**Sync Strategies and Lifecycle** Automated sync and self-heal, Pruning resources, Sync waves and hooks	7 hrs
05	**Repository Design and ApplicationSets** Monorepo versus multi-repo, App of apps pattern, ApplicationSet generators	7 hrs
06	**Security and Multi-Tenancy** SSO and RBAC policies, AppProjects for tenancy, Sealed Secrets	6 hrs
07	**Progressive Delivery with Argo Rollouts** Rollout resources, Canary steps and traffic shaping, Blue-green deployments	6 hrs
08	**Operating GitOps at Scale** Multi-cluster management, High availability and sharding, Notifications and monitoring	4 hrs
★	**Capstone · GitOps Delivery Platform for Microservices** Assessment, capstone review and certification	

✦ DETAILED CURRICULUM

The syllabus.

Modules 01–03

MODULE 01

GitOps Principles

4 hours

Hands-on lab
Compare a push-based pipeline with a pull-based reconciliation in a lab cluster.

TOPICS COVERED

- OpenGitOps principles
- Push versus pull deployment models
- Reconciliation loops and drift
- Argo CD versus Flux
- GitOps and CI separation

Argo

MODULE 02

Argo CD Fundamentals

7 hours

Hands-on lab
Install Argo CD and deploy a first application from a Git repository.

TOPICS COVERED

- Argo CD architecture
- Installing Argo CD
- Application custom resources
- argocd CLI and UI
- Sync status and health checks

Git Argo

MODULE 03

Manifests, Helm and Kustomize

7 hours

Hands-on lab
Deploy one app to dev, staging and production with Kustomize overlays.

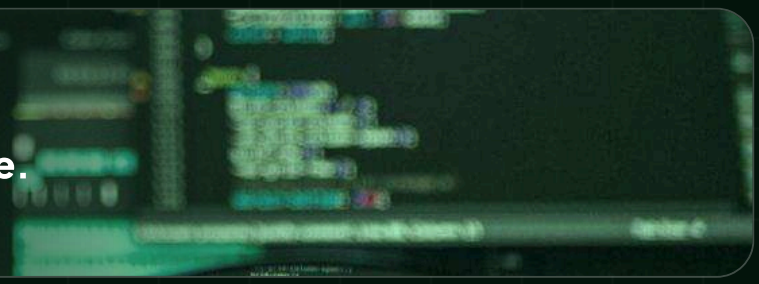
TOPICS COVERED

- Plain YAML manifests
- Helm charts in Argo CD
- Kustomize bases and overlays
- Config management plugins
- Values and parameter overrides

Helm Argo

LEARN BY DOING

8 guided labs, one in every module.



✦ DETAILED CURRICULUM

Syllabus, continued.

Modules 04–06

MODULE 04

Sync Strategies and Lifecycle

7 hours

Hands-on lab
Use sync waves and hooks to run a database migration before deployment.

TOPICS COVERED

- Automated sync and self-heal
- Pruning resources
- Sync waves and hooks
- Sync windows
- Rollback and history
- Diffing customisation

MODULE 05

Repository Design and ApplicationSets

7 hours

Hands-on lab
Generate applications for multiple clusters and environments using ApplicationSet generators.

TOPICS COVERED

- Monorepo versus multi-repo
- App of apps pattern
- ApplicationSet generators
- Environment promotion workflows
- Image Updater automation

MODULE 06

Security and Multi-Tenancy

6 hours

Hands-on lab
Configure AppProjects with RBAC and manage secrets using Sealed Secrets.

TOPICS COVERED

- SSO and RBAC policies
- AppProjects for tenancy
- Sealed Secrets
- External Secrets Operator
- Repository credentials



LEARN BY DOING

8 guided labs, one in every module.

✦ DETAILED CURRICULUM

Syllabus, continued.

Modules 07–08

MODULE 07

Progressive Delivery with Argo Rollouts

6 hours

Hands-on lab
Run a canary release that auto-aborts on failing Prometheus analysis.

TOPICS COVERED

- Rollout resources
- Canary steps and traffic shaping
- Blue-green deployments
- Analysis templates with Prometheus
- Automated abort and rollback

Argo · Prometheus

MODULE 08

Operating GitOps at Scale

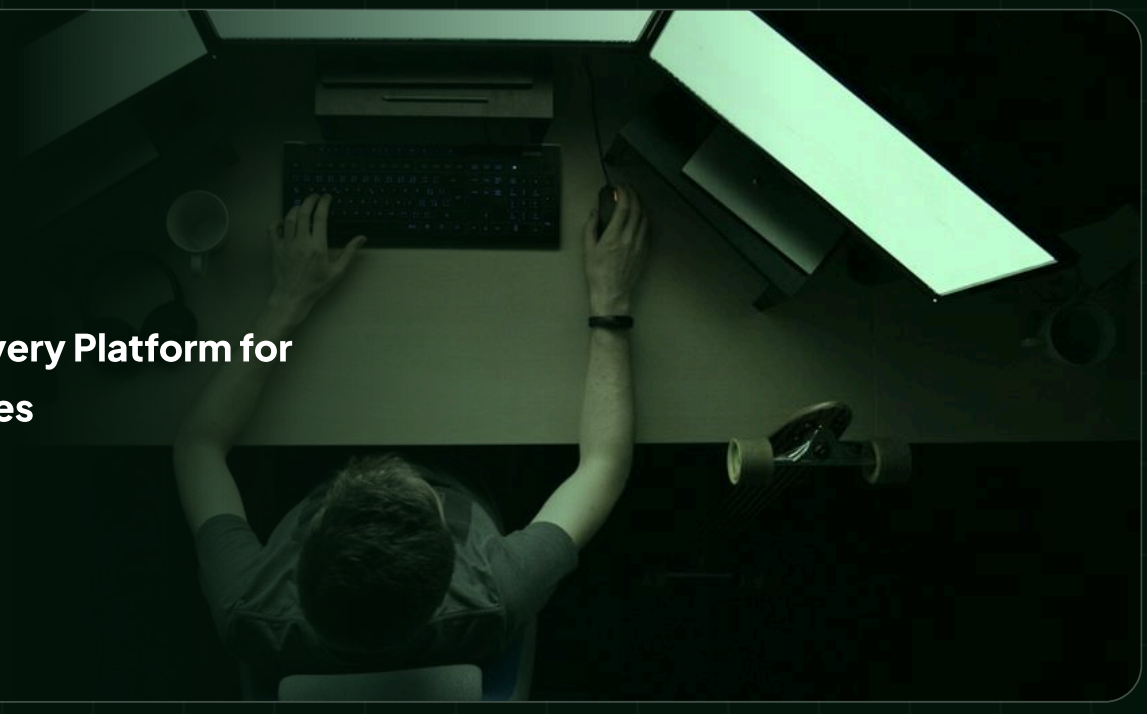
4 hours

Hands-on lab
Register a second cluster and configure Slack notifications for sync failures.

TOPICS COVERED

- Multi-cluster management
- High availability and sharding
- Notifications and monitoring
- Disaster recovery for Argo CD
- Upgrading Argo CD safely

Argo · Slack



CAPSTONE

GitOps Delivery Platform for Microservices

✦ YOUR STACK

Tools you'll build with.

Real platforms and frameworks — the same stack modern teams ship with, practised in cloud-hosted labs.

Argo
GitOps delivery

Kubernetes
Container orchestration

Git
Version control

Helm
Kubernetes packaging

Prometheus
Metrics & alerting

Slack
Team collaboration



LAB ACCESS

24×7 cloud labs for the length of the program

✦ HANDS-ON WORK

Projects that prove you can do it.

01

Multi-Environment GitOps Repository

Design a Git repository structure with Kustomize overlays and promotion workflow for dev, staging and production environments.

02

ApplicationSet Fleet Deployment

Use ApplicationSet generators to deploy a common platform stack across multiple clusters with environment-specific configuration.

03

Canary Release with Rollouts

Implement an Argo Rollouts canary with Prometheus-based analysis that automatically promotes or rolls back new versions.

CAPSTONE PROJECT

GitOps Delivery Platform for Microservices

Build a complete GitOps platform: CI builds images, Git drives Argo CD deployments across environments and clusters via ApplicationSets, secrets are managed safely, RBAC isolates teams, and Argo Rollouts handles canary releases with automated rollback.

Real-world scenario | Mentor review | Portfolio ready



CERTIFICATION

SAM-ARGOCD

Awarded on successful completion of the program assessments.

- MCQ assessments
- Practical lab evaluation
- Project & capstone review
- Final presentation



✦ HOW YOU LEARN

The SAM Learning Framework™

PHASE 01

S

Scenario

Real-world attack and use-case scenarios open every module.

PHASE 02

A

Apply

Hands-on lab work, CTF challenges and live projects.

PHASE 03

M

Master

Assessment, peer review and certification prep.

PHASE 04

M

Mentor

Post-program career guidance and support.

DELIVERY MODELS

- Instructor-Led (ILT)
- Virtual Instructor-Led
- Self-Paced Online
- E-Learning Licensing
- Blended Learning
- Corporate Onsite
- Bootcamp Intensive
- Hackathon / CTF
- Mentorship

✦ LEARNING PATH · DEVOPS & PLATFORM ENGINEERING

Where this program fits.

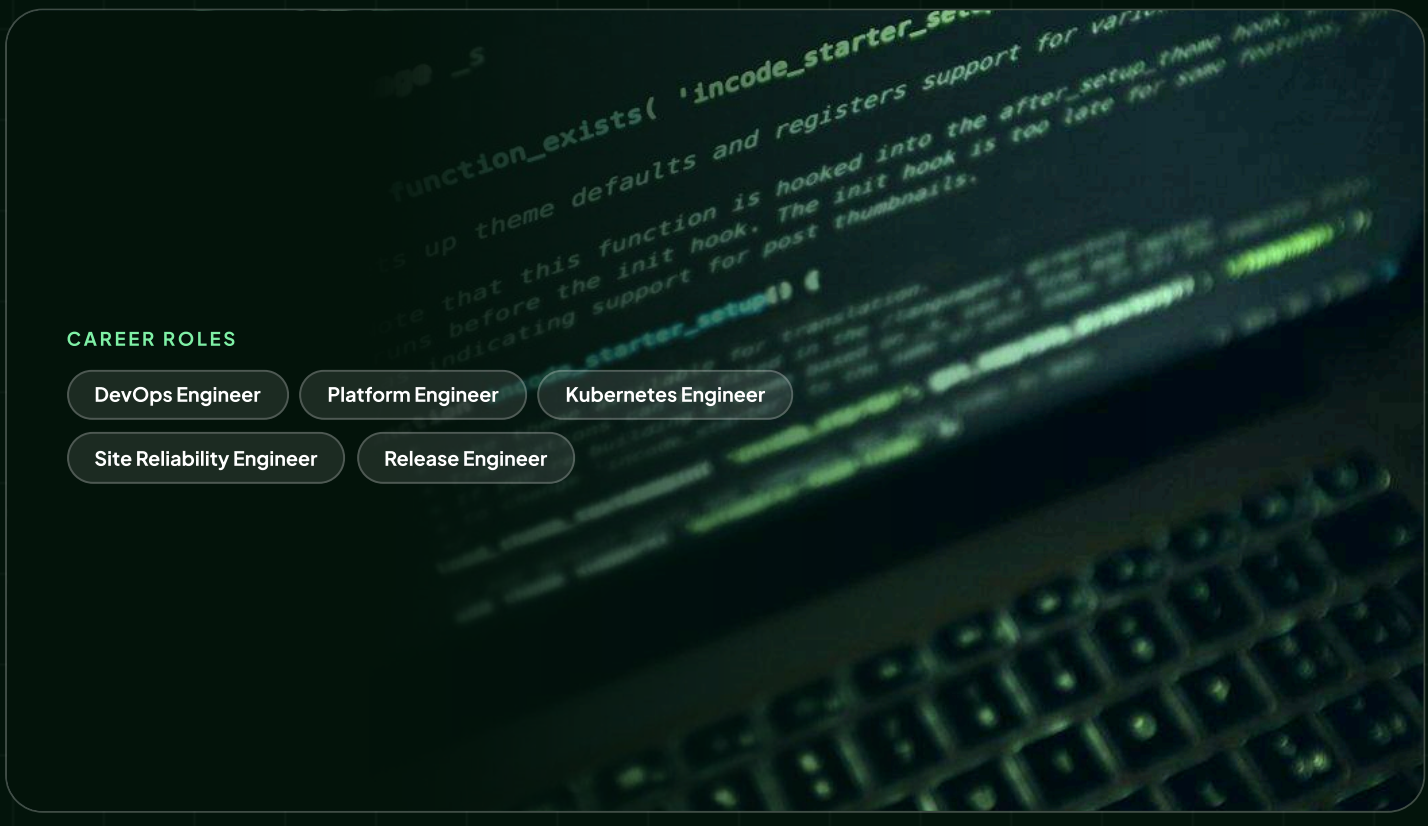
Beginner	Intermediate	Advanced	Expert
3 programs	6 programs	You are here	1 programs

BEFORE THIS

Docker Mastery	48 Hours
Kubernetes — From Zero to Hero	80 Hours
Terraform & Infrastructure as Code	56 Hours
Jenkins CI/CD Pipelines	48 Hours

UP NEXT

SRE — Site Reliability Engineering	80 Hours



CAREER ROLES

- DevOps Engineer
- Platform Engineer
- Kubernetes Engineer
- Site Reliability Engineer
- Release Engineer

✦ FAQS

Questions, answered.

Q01

Do I need prior experience to join?

This is an advanced program. You should already deploy and troubleshoot applications on Kubernetes and understand Git and CI/CD. Experience with Helm or Kustomize is helpful. Our Kubernetes course is recommended preparation.

Q02

How is the program delivered and scheduled?

Sessions are instructor-led and run as live virtual classes or in a blended format. Batch timings, including weekday and weekend options, are confirmed at enrolment, and session recordings and notes support revision between classes.

Q03

What certification will I receive?

Learners who complete the required labs, projects and final assessments receive the Samcommunity Academy SAM-ARGOCD certificate. It records the skills you have demonstrated during the program and is awarded only after assessments are passed.

Q04

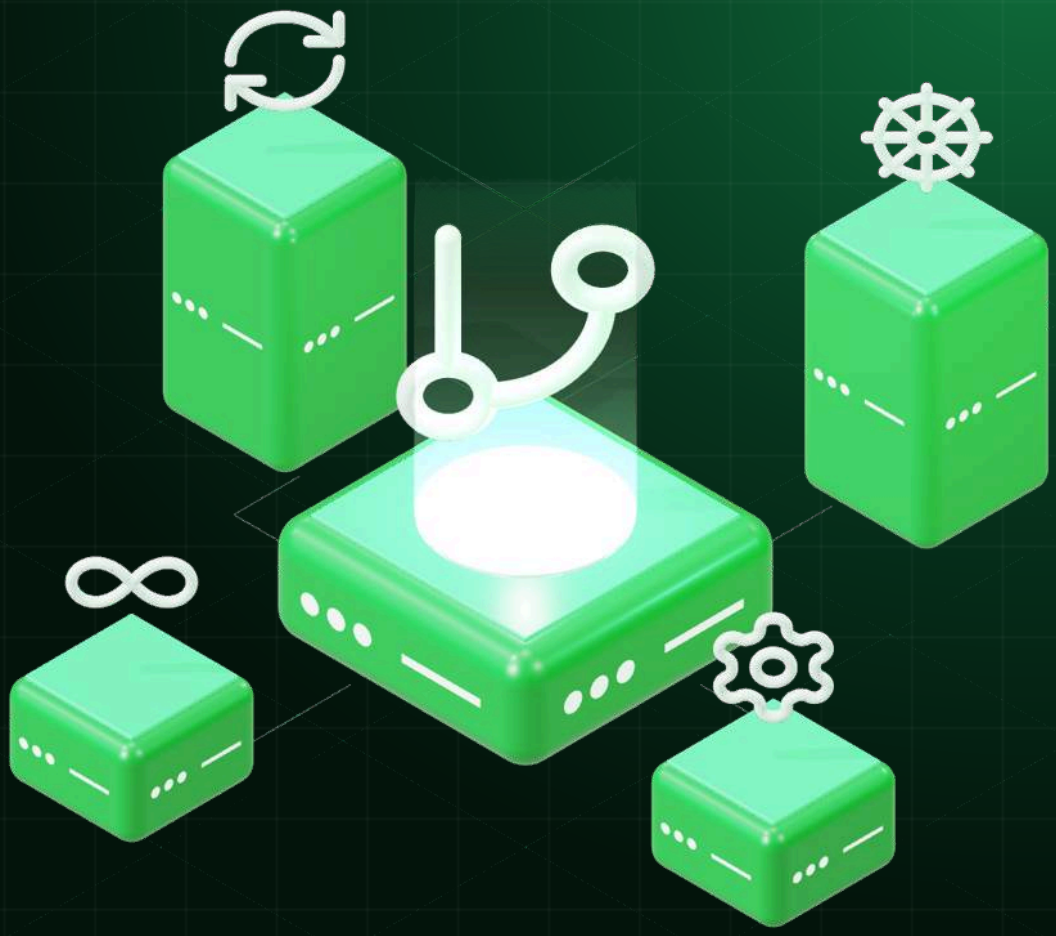
Will I get access to labs and tools?

Yes. You work with lab Kubernetes clusters, Argo CD, Argo Rollouts, Helm, Kustomize, Sealed Secrets and Prometheus, plus Git repositories. These tools are open source, so you can recreate the setup locally with kind.

Q05

Does the program include career support?

You receive guidance on building a portfolio from your projects, resume and profile review, and mock interviews focused on DevOps, platform engineering and Kubernetes release roles. Career support helps you prepare, but jobs, interviews and salaries are not guaranteed.



✦ LET'S TALK

Start ArgoCD & GitOps with Samcommunity.

INDIVIDUALS

academy@samcommunity.in

Batches, enrolment & career guidance

CORPORATE & INSTITUTIONS

corporate@samcommunity.in

Team batches & custom programs

Xylyn Samcommunity Private Limited · DPIIT-recognized startup · Surat, Gujarat, India