JingleAI Academy



LIVE WEEKEND BOOTCAMP · 12 HOURS

Docker & Kubernetes Bootcamp Curriculum

Go from your first container to a real multi-service app running on Kubernetes, live on the internet, in two weekends. Hands-on from the first minute, built for working engineers.

12 hours live 4 sessions × 3 hours	One real project JingleKart e-commerce app	Every session recorded with LMS access
Live on the internet Cloud Kubernetes, 10 replicas	Plus an AI service shipped the same way	Certificate of Achievement with a verifiable ID

SCHEDULE

Weekend batches · 2 weekends
Saturday & Sunday, 3 hours each

TRAINER

Nageswara Rao P
18+ years in DevOps · 8,000+ engineers trained

MODE

Live on Zoom, fully hands-on
No prerequisites, set up live

FEE & CONTACT

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Final Outcome

By the end of the bootcamp, you can containerize any app, run it on Kubernetes and take it live, and explain every step in an interview.

You will be able to:

- ✓ Package any application as a Docker image and publish it to a registry.
- ✓ Break a monolith into services and run them together with Docker Compose.
- ✓ Explain Kubernetes architecture clearly: control plane, nodes, pods and services.
- ✓ Write Kubernetes YAML for deployments, services, config and secrets.
- ✓ Release with zero downtime: rolling updates, rollbacks, self-healing.
- ✓ Scale automatically with health probes, resource limits and autoscaling.
- ✓ Package and install apps with Helm, and route traffic with Ingress.
- ✓ Run an app on a cloud Kubernetes cluster that anyone can open.
- ✓ Containerize and deploy an AI-powered service the same way.

Bootcamp Structure

Session 1 · Weekend 1, Saturday · 3 hours
Docker Foundations
Containers, images, Dockerfiles, Docker Hub

Session 2 · Weekend 1, Sunday · 3 hours
From Monolith to Microservices
Networking, volumes, Docker Compose

Session 3 · Weekend 2, Saturday · 3 hours
Kubernetes Core
Architecture, pods, deployments, services

Session 4 · Weekend 2, Sunday · 3 hours
Kubernetes in Production
Scaling, Helm, Ingress, cloud, AI service

One Project, Four Steps

```
JingleKart on your laptop → Docker image on Docker Hub → frontend + API + database with Compose → your own Kubernetes cluster → cloud Kubernetes, 10 replicas, public URL → + AI service
```

Session 1 — Docker Foundations

Weekend 1, Saturday · 3 hours · Live, instructor-led

Objective: understand what containers really are and package a real application as a Docker image.

Topics

- Why containers: the "works on my machine" problem
- Containers vs virtual machines vs physical servers
- Under the hood in plain words: Linux namespaces and cgroups
- Installing Docker together, live, on every laptop
- Docker architecture: client, engine, images, containers, registries
- Images, layers and tags; the container lifecycle
- Everyday commands: run, ps, logs, exec, inspect, stop, start, rm
- Writing a Dockerfile: FROM, COPY, RUN, CMD, ENTRYPOINT, EXPOSE, .dockerignore
- Docker Hub: tag, push and pull your own images

Hands-on: containerize the JingleKart product API, run it locally and push the image to your own Docker Hub account.

Session 2 — From Monolith to Microservices

Weekend 1, Sunday · 3 hours · Live, instructor-led

Objective: run a real multi-service application with Docker, the way teams build software today.

Topics

- Monolith vs microservices: build and deployment challenges
- Splitting JingleKart into frontend, API and database services
- Docker networking: bridge networks, service names, published ports
- Data that survives restarts: volumes and bind mounts
- Configuration with environment variables
- Docker Compose: services, dependencies, health checks, one-command start
- Multi-stage builds and image best practices: smaller, safer, non-root
- Debugging containers: logs, exec, inspect and the common errors

Hands-on: bring up the full JingleKart stack with one `docker compose up`, keep its data across restarts and cut the API image size.

Session 3 — Kubernetes Core

Weekend 2, Saturday · 3 hours · Live, instructor-led

Objective: understand how Kubernetes runs and heals applications, and deploy JingleKart to your own cluster.

Topics

- Why orchestration: scaling, self-healing, zero-downtime releases
- Architecture in plain words: API server, etcd, scheduler, controller manager, kubelet, kube-proxy, container runtime
- Your own Kubernetes cluster on your laptop, set up together live
- kubectl essentials: get, describe, apply, logs, exec, delete
- Pods: single and multi-container, and when to use each
- The declarative model: desired state vs current state, writing YAML
- ReplicaSets and Deployments; Services: ClusterIP, NodePort, LoadBalancer
- Rolling updates, rollbacks and namespaces

Hands-on: deploy the JingleKart API and frontend with your own YAML, scale them, delete a pod and watch it heal, roll out version 2 and roll it back.

Session 4 — Kubernetes in Production + AI Service

Weekend 2, Sunday · 3 hours · Live, instructor-led

Objective: make JingleKart production-ready, put it live on the internet and ship an AI-powered service the same way.

Topics

- ConfigMaps and Secrets; persistent volumes for the database
- Health checks: liveness and readiness probes; resource requests and limits
- Autoscaling with the Horizontal Pod Autoscaler: up to 10 replicas under load
- Ingress: one entry point and path-based routing
- Helm: packaging and installing applications with charts
- Managed Kubernetes on the cloud (EKS / GKE) and going live with a public URL
- Shipping an AI feature: containerize a small AI service and deploy it next to JingleKart
- Where this leads: Kubernetes in MLOps and model serving

Capstone: JingleKart running with 10 replicas on a cloud Kubernetes cluster that anyone can open, plus its AI service, all in your own GitHub.

Tools You Will Use

Docker | Docker Compose | Docker Hub | Kubernetes | kubectl | kind (local cluster)
Helm | NGINX Ingress | Horizontal Pod Autoscaler | Cloud Kubernetes (EKS / GKE)
Python API | PostgreSQL | GitHub | VS Code

What You Take Home

- ✓ Your JingleKart repository: Dockerfiles, Compose file, Kubernetes manifests and Helm chart
- ✓ Recordings of all 4 sessions, with LMS access for revision
- ✓ A working app you can demo and explain in interviews
- ✓ Command and YAML references for everything we use
- ✓ A Certificate of Achievement with a verifiable ID you can add to LinkedIn

CERTIFICATE

A Certificate of Achievement, issued automatically to everyone who completes at least 2 of the 4 sessions, with a verification page and one-click Add to LinkedIn.

YOUR TRAINER

Nageswara Rao P, Founder of JingleAI Academy. 18+ years in DevOps, former DevOps Architect at Walmart Labs India, 8,000+ engineers trained.

YOUR NEXT STEP

MLOps Certification Program – Master Course

Docker and Kubernetes are the foundation of MLOps. In the MLOps program, JingleKart grows into JingleKart AI, with models trained, versioned, served on Kubernetes and monitored in production.

Your full ₹4,999 bootcamp fee is credited if you join within 3 weeks of the bootcamp.

Reserve your seat · ₹4,999
Limited seats · confirmed only after payment

jingleaiacademy.com/docker-kubernetes-bootcamp
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