

## **Advanced Backend, System Design**

**Advanced backend communication**

**Message queues and PubSubs**

**Proxies, Load balancers**

**Redis Deep dive**

**Kafka Deep dive**

**Common Design Patterns in JS**

**Advanced DB concepts (Indexing, normalization)**

**Rate limiting**

**Captchas and DDoS protection**

**Sharding, Replication, Resiliency**

**Horizontal and vertical scaling**

**Polling and websockets**

**Grpc**

**Capacity Estimation**

**Load Balancers**

**CAP Theorem**

**Testing Node.js Apps in 2023**

**Real time communication, basics of WebRTC**

## **Advanced Devops**

**Docker Deep dive**

**Container orchestration, Docker Swarm**

**Kubernetes**

**CI/CD**

**Monitoring systems basics to advance**

**Prometheus, Grafana**

**Newrelic as a paid service**

**Serverless Deep dive**

**AWS Constructs (EC2, S3, CDNs, LB, EKS)**

## **Projects**

**Zerodha end to end**

**Zapier end to end**

**Real world open source projects**