Poridhi.io

MLOPS WITH CLOUD

# SYSTEM DESIGN AND MLOPS

CLASS 2

MODULE 1: INTRODUCTION OF MLOPS

MWC2

# AGENDA

- AUTOMATED ML PIPELINES ML SYSTEMS
- CONTAINERIZATION AND ORCHESTRATION (E.G., DOCKER, KUBERNETES)
- CONTINUOUS INTEGRATION/CONTINUOUS DEPLOYMENT (CI/CD) FOR ML
- MODEL VERSIONING AND EXPERIMENT TRACKING
- SCALABLE DATA PROCESSING AND FEATURE ENGINEERING
- MONITORING ML SYSTEMS IN PRODUCTION
- A/B TESTING AND GRADUAL ROLLOUT STRATEGIES
- BEST PRACTICES FOR ML SYSTEM ARCHITECTURE

# LET'S RECAP

# MLOps is a set of best practices for "putting machine learning" in production and enhance collaboration


Poridhi.io

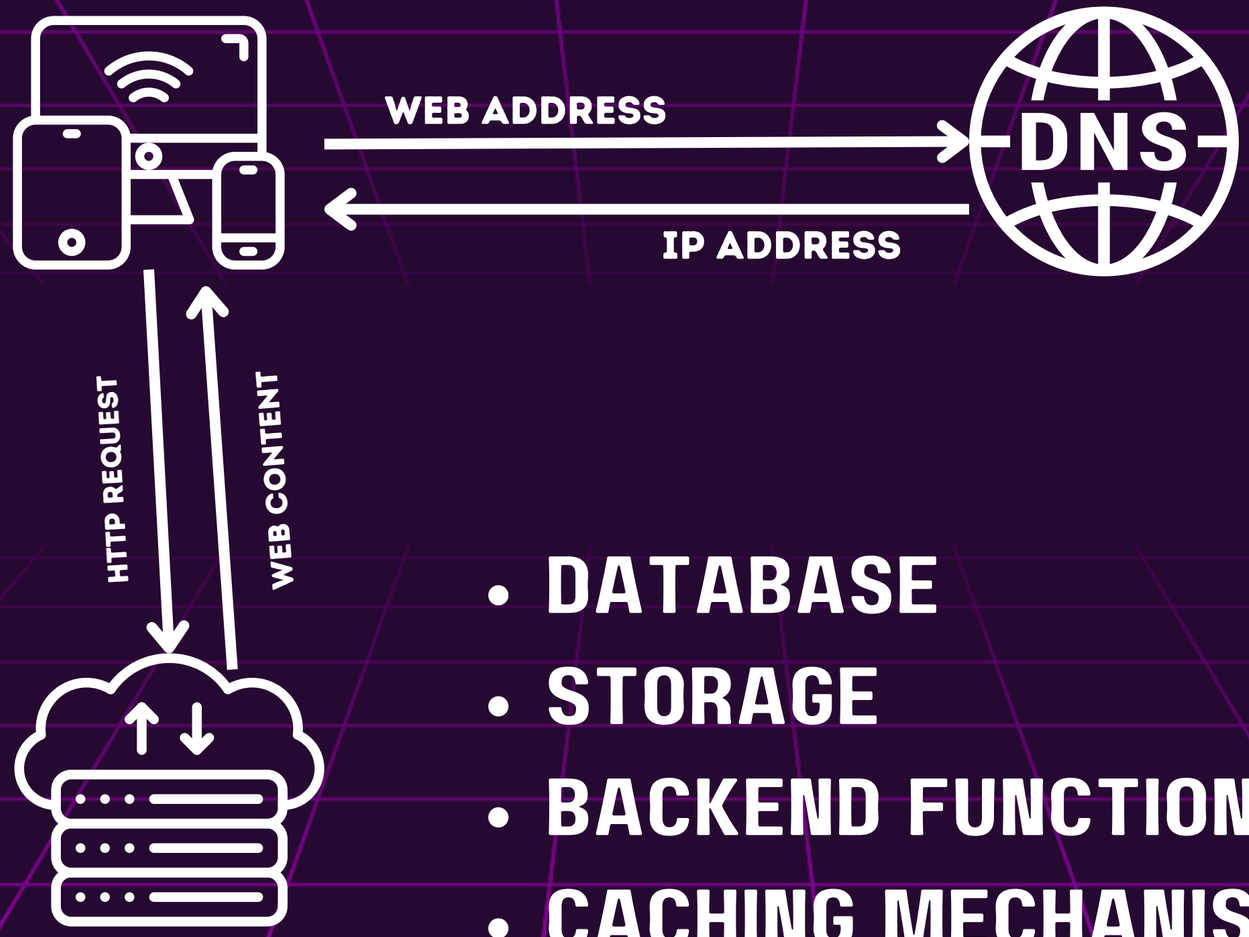
MWC2

# AUTOMATING EVERYTHING IN THE PROCESS!

Poridhi.io

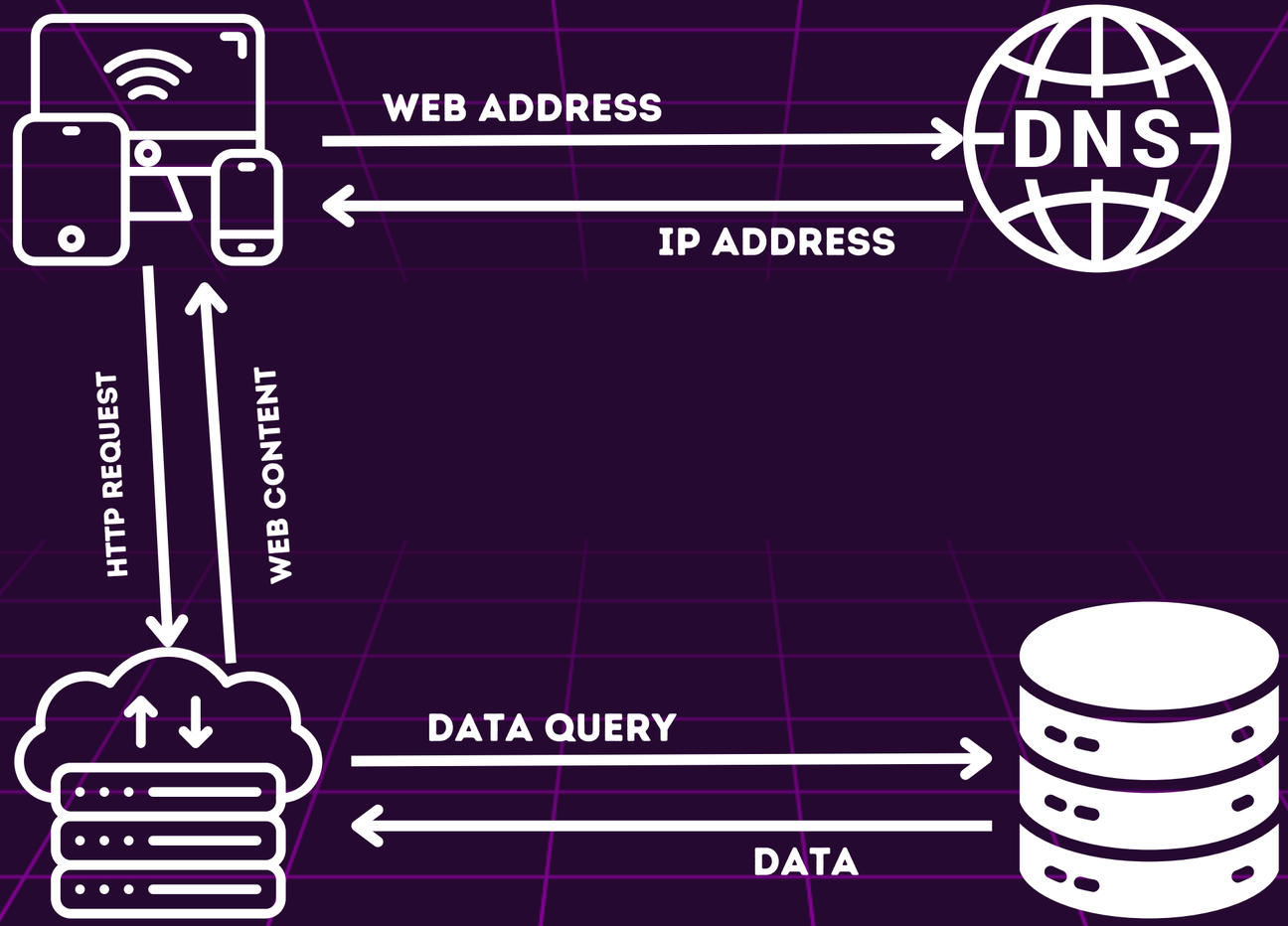
MWC2

# DESIGNING A SIMPLE SYSYEM




- DATABASE
- STORAGE
- BACKEND FUNCTIONALITIES
- CACHING MECHANISMS

# DESIGNING A SIMPLE SYSYEM



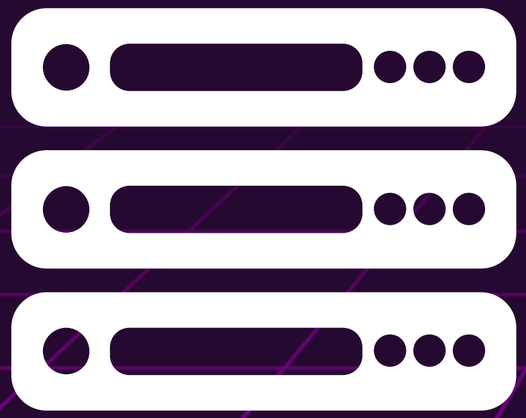
# BUT WHAT'S GONNA HAPPEN WHEN DEMAND INCREASES MORE AND MORE?

# FOR THAT, WE NEED TO SCALE UP THE SYSTEMS

# FOR THAT, WE NEED TO SCALE UP THE SYSTEMS

# SCALING

## 1. VERTICAL SCALING



VERTICAL SCALING IS A PROCESS TO ADD MORE RAMS AND CPUS TO THE SERVER

# 2. HORIZONTAL SCALING

HORIZONTAL SCALING IS ADDING MORE AND MORE SERVERS TO THE SYSTEM