

# Benefits of CI/CD

## Automation for Cloud-Based Software Products



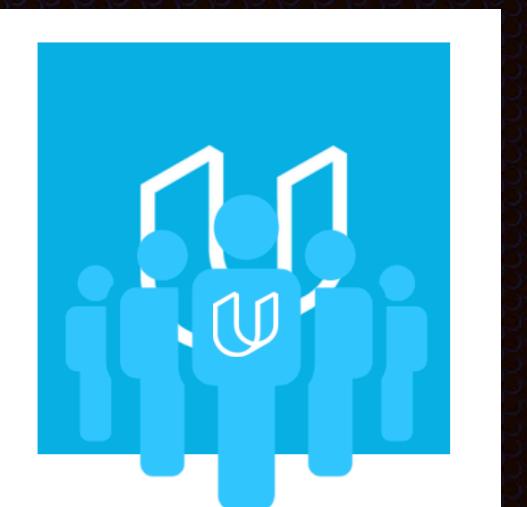
# What is CI?

- CI - Continuous Integration
- The practice of merging all developers' working copies to a shared mainline several times a day.
- It is process of “**Making**”
- Some Common CI-related phases
  - Compile
  - Unit Test
  - Static Analysis
  - Dependency Vulnerability testing
  - Store Artifact



# What is CD?

- CD - Continuous Deployment
- A software engineering in which the value is delivered frequently through automated deployments.
- It is process of **“Moving” the artifact from the shelf to the spotlight.**
- Some Common CD-related phases
  - Creating infrastructure
  - Provisioning servers
  - Copying files
  - Promoting to production
  - Smoke Testing(aka Verify)
  - Rollbacks



# Benefits CI/CD - Cost Reduction

- Reduce Cost
  - Less developer time on issues from new developer code because we catching Compile Errors After Merge
  - Less infrastructure costs from unused resources since infrastructure Cleanup has been automated
- Avoid Cost
  - Less human error, Faster deployments
  - Less bugs in production and less time in testing because we catch the unit test failures during the integration.

# Benefit of CI/CD - Increase Revenue

- Increase Revenue
  - Less time to market
    - Because we deploy to Production without Manual Checks
  - New value-generating features released more quickly
    - Because of the faster and more frequent Production Deployments
- Protect Revenue
  - Reduced downtime from a deploy-related crash or major bug by applying automated Smoke Tests
  - Quick undo return production to working state when we apply the automated rollback Triggered by Job Failure