



# **Benefits of CI/CD For UdaPeople**

# Overview

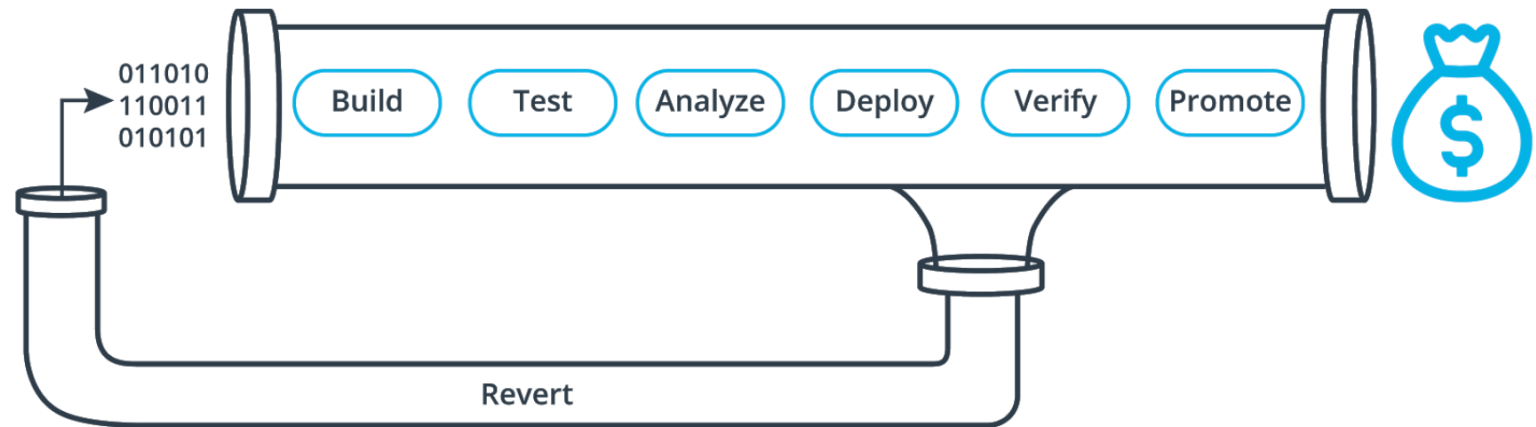
- CI/CD Definition
- CI/CD Pipeline
- CI/CD Benefits
- CI/CD Impacts on UdaPeople

# CI/CD Definition

- **Continuous integration**
  - Continuous integration implies that new user stories in agile are built, tested, and integrated into the existing system. Maintaining the wholeness and the integrity of the software — is the objective of the CI process. To implement continuous integration in Agile, you must push the changes to the larger system multiple times (at least daily).
- **Continuous delivery**
  - Continuous delivery implies that the new user stories are automatically tested, sent back for bug fixtures if any, automatically retested, and sent to a central repository. The new features can then be released to the production environment.
- **Continuous deployment**
  - Continuous deployment implies that the new user stories present in a central repository are automatically released, i.e., making the newly added features available to the end-users.

# CI/CD Pipeline

## The CI/CD Pipeline



# CI/CD Benefits

Technical Language	Value on UdaPeople	Translation
Catch Compile Errors After Merge	Reduce Cost	Less developer time on issues from new developer code
Catch Unit Test Failures	Avoid Cost	Less bugs in production and less time in testing
Detect Security Vulnerabilities	Avoid Cost	Prevent embarrassing or costly security holes
Automate Infrastructure Creation	Avoid Cost	Less human error, Faster deployments
Automate Infrastructure Cleanup	Reduce Cost	Less infrastructure costs from unused resources
Faster and More Frequent Production Deployments	Increase Revenue	New value-generating features released more quickly
Deploy to Production Without Manual Checks	Increase Revenue	Less time to market
Automated Smoke Tests	Protect Revenue	Reduced downtime from a deploy-related crash or major bug
Automated Rollback Triggered by Job Failure	Protect Revenue	Quick undo to return production to working state

# CI/CD Impact on UdaPeople

- Improve code quality
- Automated releases
- Less time troubleshooting
- Deliver faster means higher revenue