

# Benefits of Continuous Integration and Continuous Deployment

For Udacity Project 3

By

Micheal Obiora

# Create Revenue

CICD helps in generating revenue by understanding users' needs, producing innovative features, and turning them into robust code is not necessarily enough if your competition is moving more quickly. With an automated pipeline you can ship changes weekly, daily or even hourly.

It continuously merges codes and continuously deploys them to production after thorough testing, keeping the code in a release-ready state. It's important to have as part of deployment a production environment set up that closely mimics that which end-users will ultimately be using. Being able to push changes out quickly and with confidence means you can respond to new trends and address pain-points as they emerge.

# Protect Revenue

CICD helps to protect revenue by reducing customer churns. Your customers want to know they are being heard. Adding new features and changes into your CI/CD pipeline based on the way your customers use the product will help you retain current users and gain new ones.

The first few moments of a new customer trying out your product is a make-or-break-it moment.

Therefore, don't waste first impressions as they are key to turning new customers into satisfied customers. Keep your customers happy with fast turnaround of new features and bug fixes.

Utilizing a CI/CD approach also keeps your product up-to-date with the latest technology and allows you to gain new customers who will select you over the competition through word-of-mouth and positive reviews.

# Control Cost

CICD helps to control cost using MTTR.

Basically, MTTR helps you track the amount of time spent to recover from a failure.

CI/CD reduces the MTTR because the code changes are smaller and fault isolations are easier to detect. One of the most important business risk assurances is to keep failures to a minimum and quickly recover from any failures that do happen. Application monitoring tools are a great way to find and fix failures while also logging the problems to notice trends faster.

# Reduce Cost

CICD helps reduce cost through automation in the pipeline by reducing the number of errors that can take place in the many repetitive steps of CI and CD. Doing so also frees up developer time that could be spent on product development as there aren't as many code changes as possible to fix down the road if the error is caught quickly.

Finding and fixing bugs late in the development process is expensive and time-consuming. This is especially true when there are issues with features that have already been released to production.