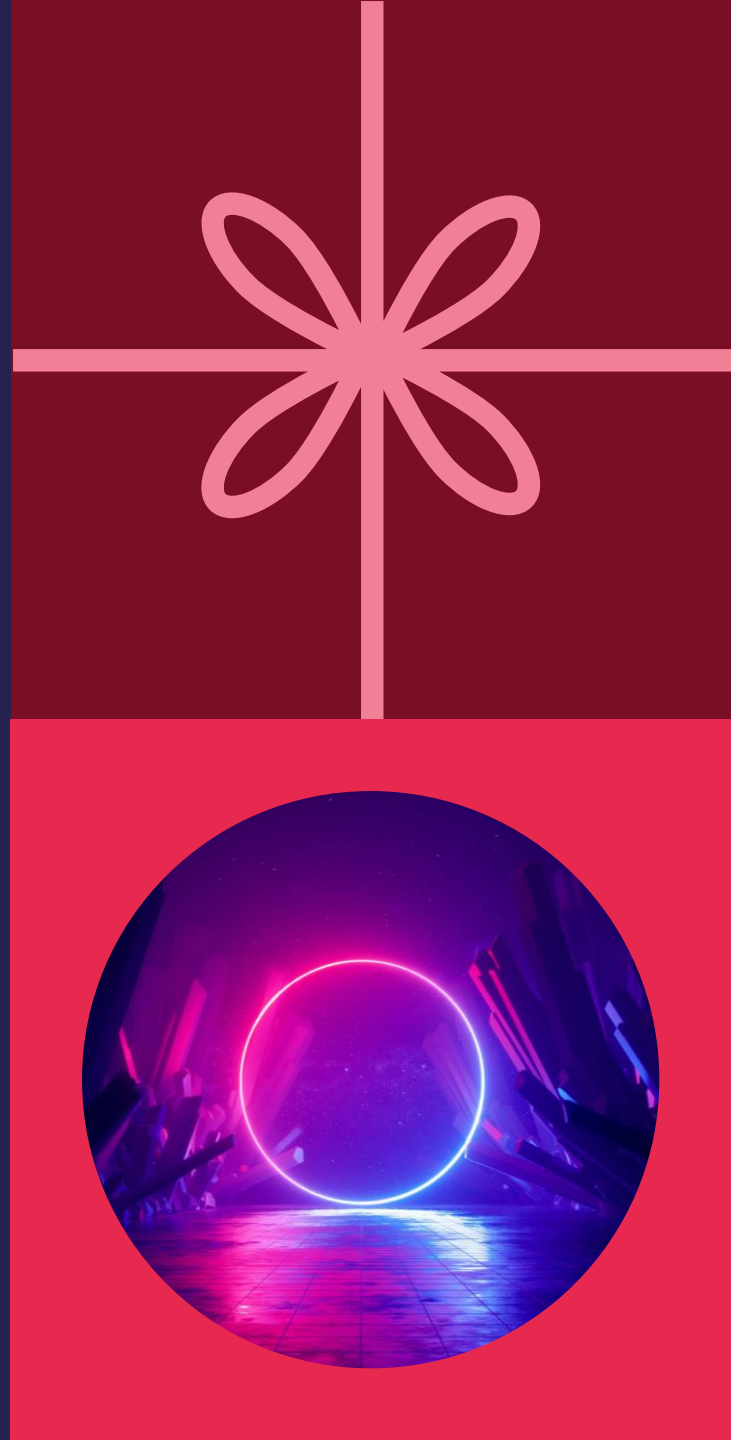


CI/CD UDACITY PROJECT 3

**PROJECT: GIVE YOUR APPLICATION AUTO DEPLOY
SUPERPOWERS**

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WHAT DOES CI/CD STAND FOR

CONTINUOUS INTEGRATION

CONTINUOUS INTEGRATION IS A PRACTICE OF MERGING ALL DEVELOPERS WORKING COPIES TO A SHARED MAINLINE SEVERAL TIMES A DAY.

CONTINUOUS DELIVERY

CONTINUOUS DELIVERY IS AN ENGINEERING PARADIGM IN WHICH TEAMS PRODUCE AND RELEASE VALUE IN SHORT CYCLES

CONTINUOUS DEPLOYMENT

CONTINUOUS DEPLOYMENT IS THE PROCESS OF MOVING THE ARTIFACT FROM THE SHELF TO THE SPOT LIGHT.

CHALLENGES IN DEPLOYMENT AND INTEGRATION

- LATE FEEDBACK FROM BUSINESS WHICH HINDERS CREATING FLEXIBLE SOLUTIONS
- COMPLEX DEPLOYMENT WITH NO ROLLBACK MECHANISM, SMOKE TEST. THE PROCEDURE IS ALSO DIFFICULT TO UNDERSTAND
- ERROR-PRONE MANUAL RELEASES WHICH LEADS TO DELAYS OF PRODUCTION DEPLOYMENTS
- POOR SOFTWARE QUALITY DUE TO INSUFFICIENT TIME FOR QUALITY ANALYSIS

CI/CD –THE SOLUTION TO ALL DEPLOYMENT AND INTERGRATION CHALLENGES

SOLUTION FOR LATE FEEBACK FROM BUSINESS:

- IMPLEMENT CONTINOUS DEPLOYMENT: AUTOMATED DEPLOYMENTS OF CHANGES AT ANY GIVEN POINT IN TIME.
- INVOLVE CUSTOMERS AND BUSINESS STAKEHOLDERS ALREADY IN DEPLOYMENT PROCESS

BENEFITS:

- FASTER FEEBACK CYCLES OF BUSINESS LEAD TO HIGHER CUSTOMER SATIFICATION RATES SINCE THEY ARE INVOLVED FROM THE BEGINNING OF FEATURE DEVELOPMENT/DEPLOYMENT AND NOT JUST AT A FIXED RELEASE DATE

CI/CD –THE SOLUTION TO ALL DEPLOYMENT AND INTERGRATION CHALLENGES

SOLUTION FOR COMPLEX DEPLOYMENTS AND HANDCRAFTED AUTOMATION:

- AUTOMATE TODAY'S MANUAL DEPLOYMENTS STEPS FOR SMOKE TESTS AND ROLLBACKS
- ADD AUTOMATED INFRASTRUCTURE PROVISIONING

BENEFITS:

- AUTOMATED SMOKE TESTS AND ROLLBACKS WILL PROTECT PROJECT REVENUE DUE TO REDUCED DOWNTIMES FROM DEPLOY RELATED CRASHES AND FAST AND AUTOMATED REBUILDING OF PRODUCTION READY STATE
- THE TRUTH LIES IN THE SOURCE CODE. THIS MEANS THAT REGRESSIONS AND BREAKING CHANGES IN CODE AS WELL AS IN INFRASTRUCTURE DEPLOYMENTS CAN BE FOUND MUCH QUICKER AND CAN BE RESOLVED FOR THE WHOLE AUTOMATION PROCESS AND AS A PLUS CHANGES ARE ALWAYS DOCUMENTED IN SOURCE CODE.