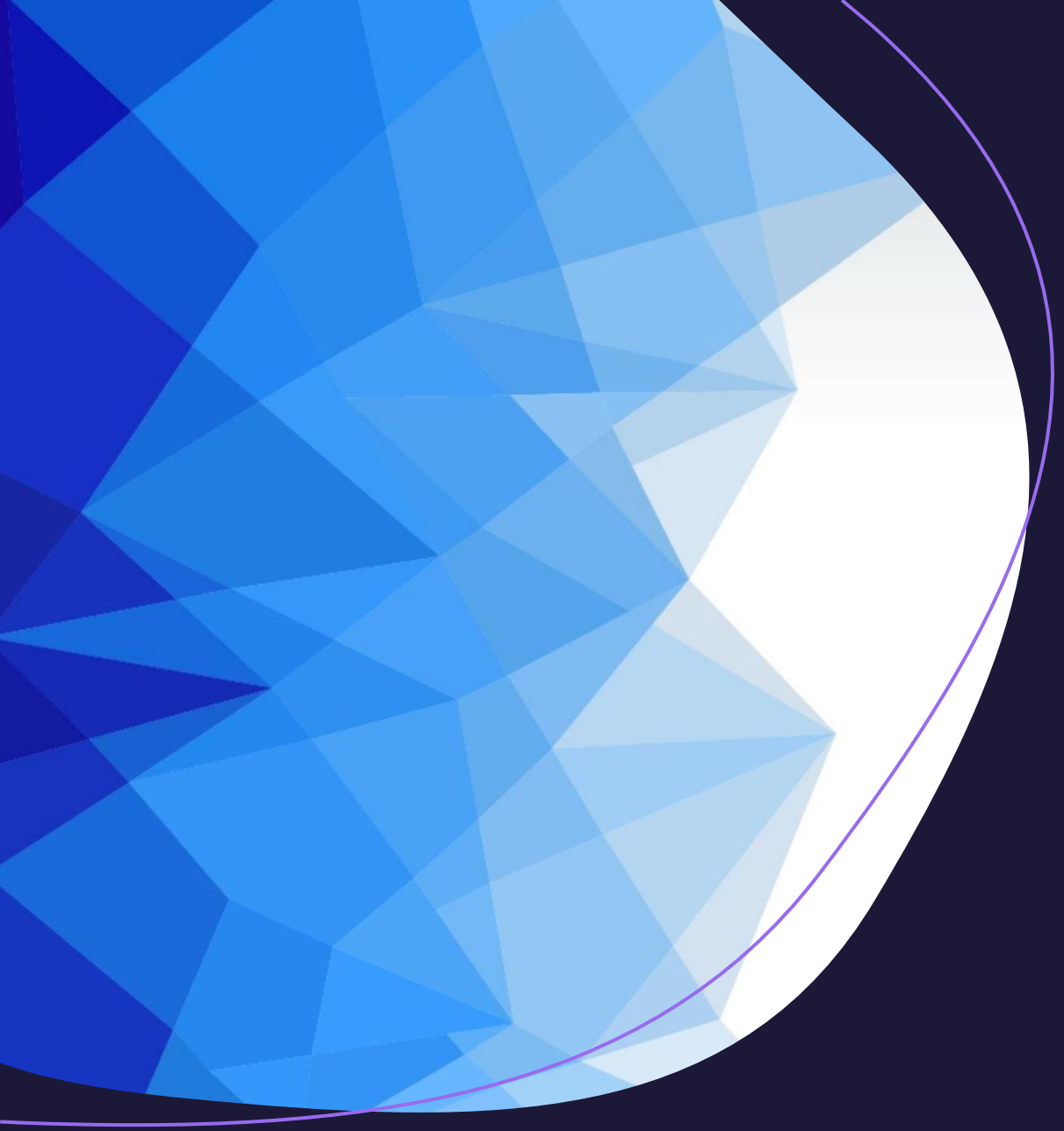

CI/CD — A better way to build and ship our products.

Fundamentals and Benefits of CI/CD to Achieve, Build, and Deploy Automation for Our Products.

Continuous Integration

Continuous Integration (CI) is a development practice where developers integrate code into a shared repository frequently, preferably several times a day. Each integration can then be verified by an automated build and automated tests. While automated testing is not strictly part of CI it is typically implied.

Some of the steps in this stage include compiling, testing, running static analysis, checking for vulnerabilities in our dependencies and storing the code artifacts.

Continuous Deployment

Continuous deployment is a strategy for software releases wherein any code commit that passes the automated testing phase is automatically released into the production environment, making changes that are visible to the software's users.

Some steps in this stage include: setting up infrastructure, provisioning servers, copying files, smoke testing, promoting to production and even rolling back a change if something did not look right.

Benefits of CI/CD to our business.

We would have these benefits when we set up our CI/CD pipeline:

- Faster and More Frequent Production Deployment: We would get more revenue by shipping value generating features more frequently to the customers, this would also help us to get feedback early and stay ahead.
- Automated Smoke Tests: This would protect our revenue by reducing downtime caused by deploy-related crash or bugs.
- Catch Unit Test Failures: Having less bug in our live app and spending less time doing manual testing would help us to avoid cost.

- Detect Security Vulnerabilities: This would enable us to easily detect serious security flaws that would be embarrassing if it had made it to the public. This would save us money trying to win back the customers' trust and rebuilding our image.
- Deploy to Production Without Manual Checks: Less time to market would help us to increase our revenue.
- Automated Rollback triggered by job failure which would help in reducing cost and lower downtime