

DevOps Implementation for Industries

By: Neelanjan Mukherji

DevOps

- DevOps is a set of practices that combines software development (Dev) and IT operations (Ops).
- It aims to shorten the systems development life cycle and provide continuous delivery with high software quality.

Basic Background



Git

- Git is a distributed version-control system for tracking changes in source code during software development.
- It is designed for coordinating work among programmers, but it can be used to track changes in any set of files.

GitHub

- GitHub is a global company that provides hosting for software development version control using Git.
- It offers the distributed version control and source code management functionality of Git, plus its own features.

Docker

- Docker is a set of platform as a service products that use OS-level virtualization to deliver software in packages called containers.
- Containers are isolated from one another and bundle their own software, libraries and configuration files.

Kubernetes

- Kubernetes is an open-source container-orchestration system for automating computer application deployment, scaling, and management.
- It was originally designed by Google and is now maintained by the Cloud Native Computing Foundation.

Jenkins

- Jenkins is a free and open source automation server.
- It helps automate the parts of software development related to building, testing, and deploying, facilitating continuous integration and continuous delivery.

Agile Methodology

- Agile methodology adopts an iterative and incremental approach to software development, breaking the process into smaller sprints for continuous improvement and adaptability.
- Agile emphasizes close collaboration with customers or product owners, actively seeking their feedback to ensure the delivered product meets their needs and expectations.

Practical Implementations

The following website is made by using Vite, React, Tailwind CSS, Git, GitHub, GitHub Actions, GitHub Pages, Docker.

<https://maverick7274.github.io/NTCC-Docker/index.html>

Other Resources

Description	Link
Full Report	https://www.overleaf.com/project/647bc56cde5d9feb8e8576da
GitHub Repository	https://github.com/Maverick7274/NTCC-Report-2023
Git & GitHub Practical Repository	https://github.com/Maverick7274/NTCC-Git
Docker Practical Repository	https://github.com/Maverick7274/NTCC-Docker

Thank You