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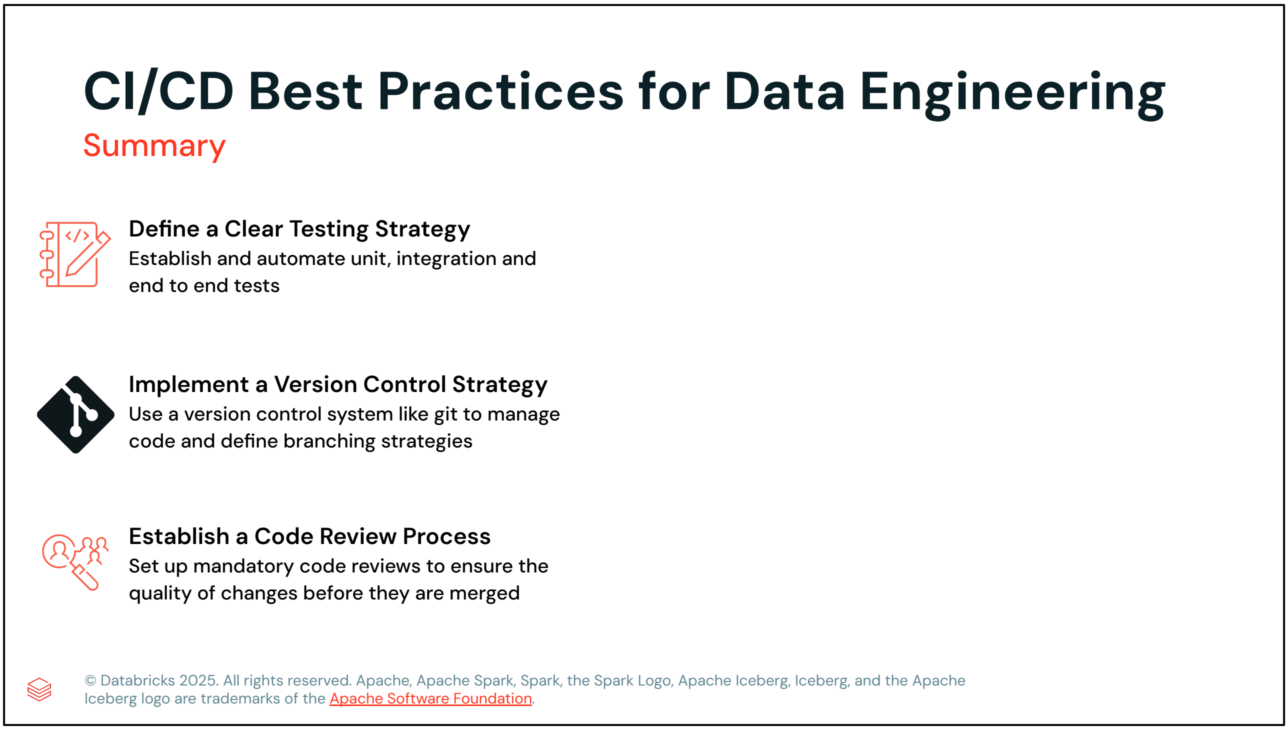
Doing More with DABs

LECTURE

CI/CD Best Practices for Data Engineering

In this section, we will cover CI/CD best practices for Data Engineering



CI/CD Best Practices for Data Engineering

Summary

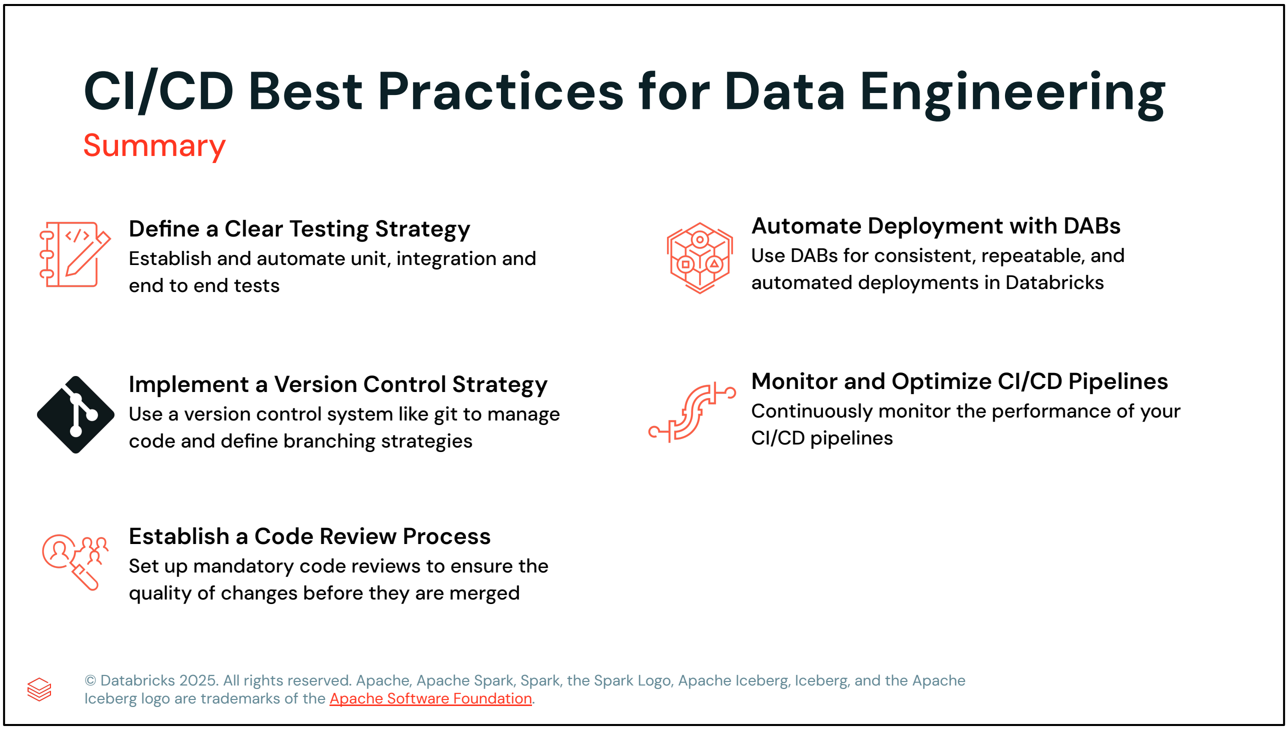
Define a Clear Testing Strategy
Establish and automate unit, integration and end to end tests

Implement a Version Control Strategy
Use a version control system like git to manage code and define branching strategies

Establish a Code Review Process
Set up mandatory code reviews to ensure the quality of changes before they are merged

When it comes to implementing CI/CD strategies in an organization, especially in data engineering, there are a few key best practices to think about.

- First, define a clear testing strategy that includes unit, integration, and end-to-end tests. Automating these tests ensures your code functions correctly and that data integrity is maintained before deployment. This reduces the risk of errors and improves the overall quality of your codebase.
- Next, implement a solid version control strategy using systems like GitHub to manage your code, notebooks, and configuration files. A good version control strategy is essential for collaboration across teams. I recommend defining a branching strategy to help manage different stages of development, making it easier to track changes and resolve conflicts.
- It’s also crucial to establish a robust code review process. Peer reviews help ensure that changes are thoroughly vetted before they are merged. Additionally, CI tools can automatically trigger builds on pull requests, offering a quick way to validate changes and catch issues early on.



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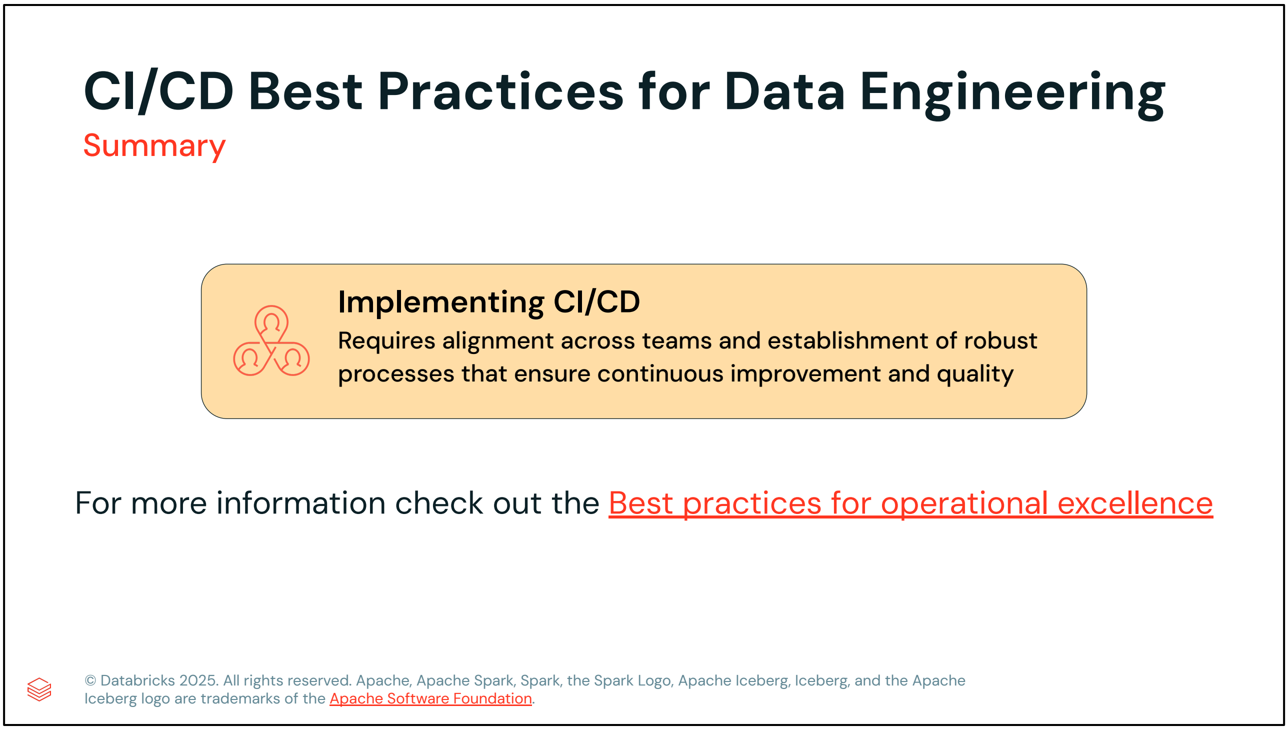
Automate Deployment with DABs
Use DABs for consistent, repeatable, and automated deployments in Databricks

Monitor and Optimize CI/CD Pipelines
Continuously monitor the performance of your CI/CD pipelines

- Next, leverage Databricks Asset Bundles (DABs) for consistent and repeatable deployments. Automating the deployment process minimizes human error and speeds up the deployment cycle. DABs ensure that the right code is always deployed to the correct environment, maintaining consistency across your projects.
- Finally, continuously monitor the performance of your CI/CD pipelines. Optimizing for speed, reliability, and scalability ensures your pipeline runs as efficiently as possible. Gather feedback from developers, identify bottlenecks, and work toward improving automation efficiency.

By implementing these practices, you'll create a streamlined, reliable, and scalable CI/CD process within your Databricks environment. This will not only improve your development cycles but also increase the overall quality of your data-driven products.



CI/CD Best Practices for Data Engineering

Summary

Implementing CI/CD

Requires alignment across teams and establishment of robust processes that ensure continuous improvement and quality

For more information check out the Best practices for operational excellence

In conclusion, implementing CI/CD practices requires alignment across teams and the establishment of set processes that ensure continuous improvement and quality.

For more detailed best practices, I recommend checking out the Databricks Documentation: Best Practices for Operational Excellence.

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Thank you for completing this lesson and continuing your journey to develop your skills with us.