GITHUB ACTIONS, DVC AND CML (5 days)
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1. Introduction to GitHub Actions:
   - ⍰ Understanding what GitHub Actions is and its key components.
   - ⍰ Overview of CI/CD concepts.
1. 1. Setting Up Workflows:
   - ⍰ Creating and configuring a basic workflow file.
   - ⍰ Defining triggers for workflow execution.
2. 2. Workflow Syntax and Structure:
   - ⍰ Exploring YAML syntax for workflows.
   - ⍰ Organizing workflows with jobs and steps.
3. 3. Using Actions:
   - ⍰ Incorporating existing actions into workflows.
   - ⍰ Creating custom actions for specific needs.
4. 4. Environment and Secrets:
   - ⍰ Managing environment variables.
   - ⍰ Handling secrets securely in GitHub Actions.
5. 5. Artifact Management:
   - ⍰ Storing and retrieving build artifacts.
   - ⍰ Sharing data between jobs.
6. 6. Matrix Builds:
   - ⍰ Configuring matrix builds for testing across multiple environments.
7. 7. Conditional Workflow Execution:
   - ⍰ Adding conditional logic to workflows.
8. 8. Notifications and Status Badges:
   - ⍰ Configuring notifications for workflow events.
   - ⍰ Adding status badges to your repository.
9. 9. Performance Optimization:
   - ⍰ Strategies for faster builds.
   - ⍰ Caching dependencies and build outputs.
10. 10. Debugging Workflows:
   - ⍰ Troubleshooting common issues.
   - ⍰ Using logs and artifacts for debugging.
11. 11. Advanced Deployment Strategies:
   - ⍰ Implementing a CD pipeline.
   - ⍰ Blue-green deployments and canary releases.

Additional topics:

1. 1. Code Quality and Analysis:
   - ⍰ Integrating code quality tools (linters, static analyzers) into

workflows.
- o [?] Analyzing code coverage and reporting.
2. 2. Security Scanning:
   - o [?] Incorporating security scanning tools into your workflows.
   - o [?] Ensuring secure dependencies and code.
3. 3. Cross-Platform Workflows:
   - o [?] Setting up workflows for multi-platform support (Windows, Linux, macOS).
4. 4. Integration with External Services:
   - o [?] Connecting GitHub Actions with other services (Slack, email, etc.).
   - o [?] Integrating with third-party tools and services.
5. 5. Managing Workflow Secrets:
   - o [?] Best practices for handling secrets securely.
   - o [?] Rotating and updating secrets.