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Online Experimentation

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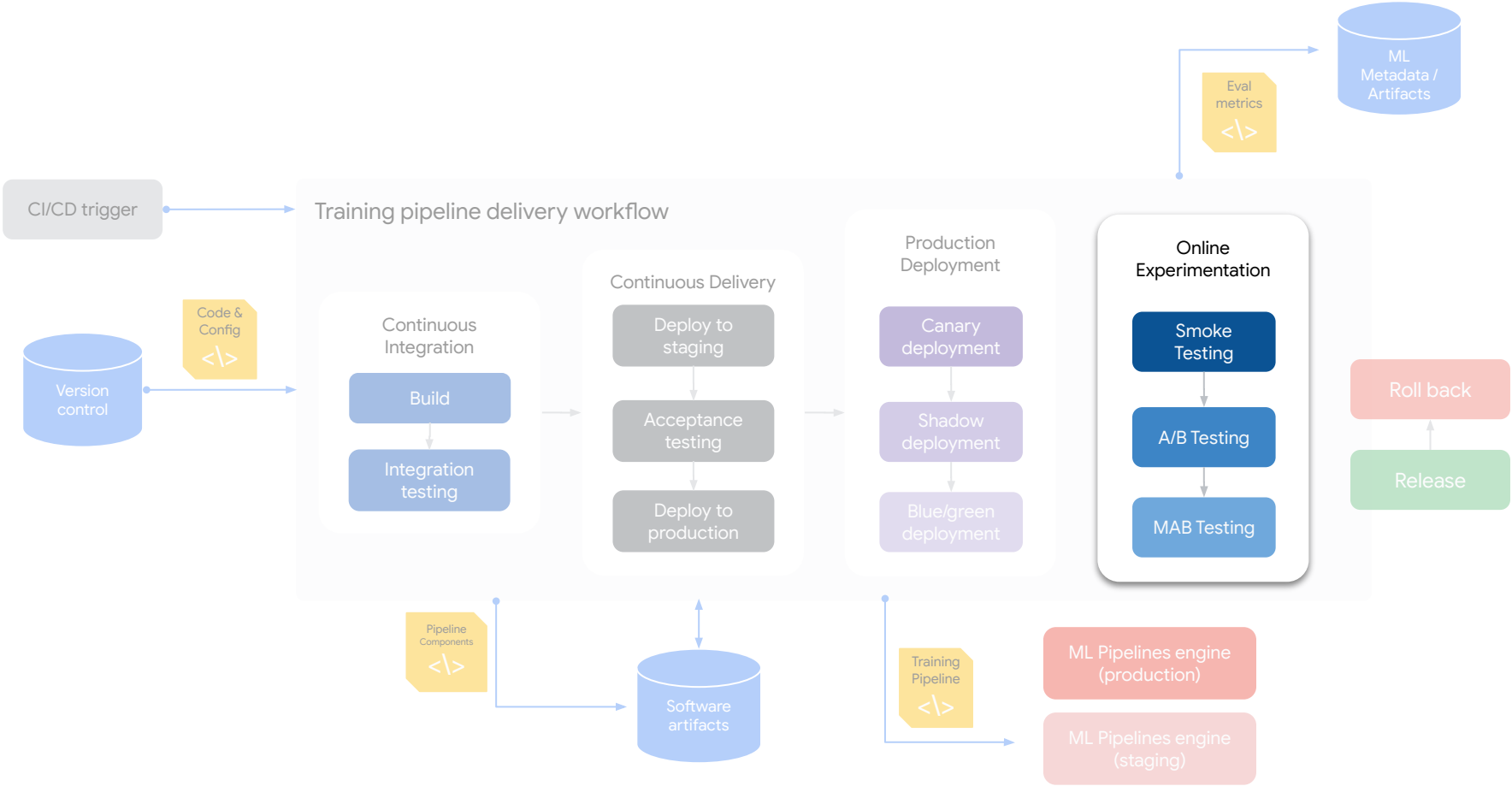

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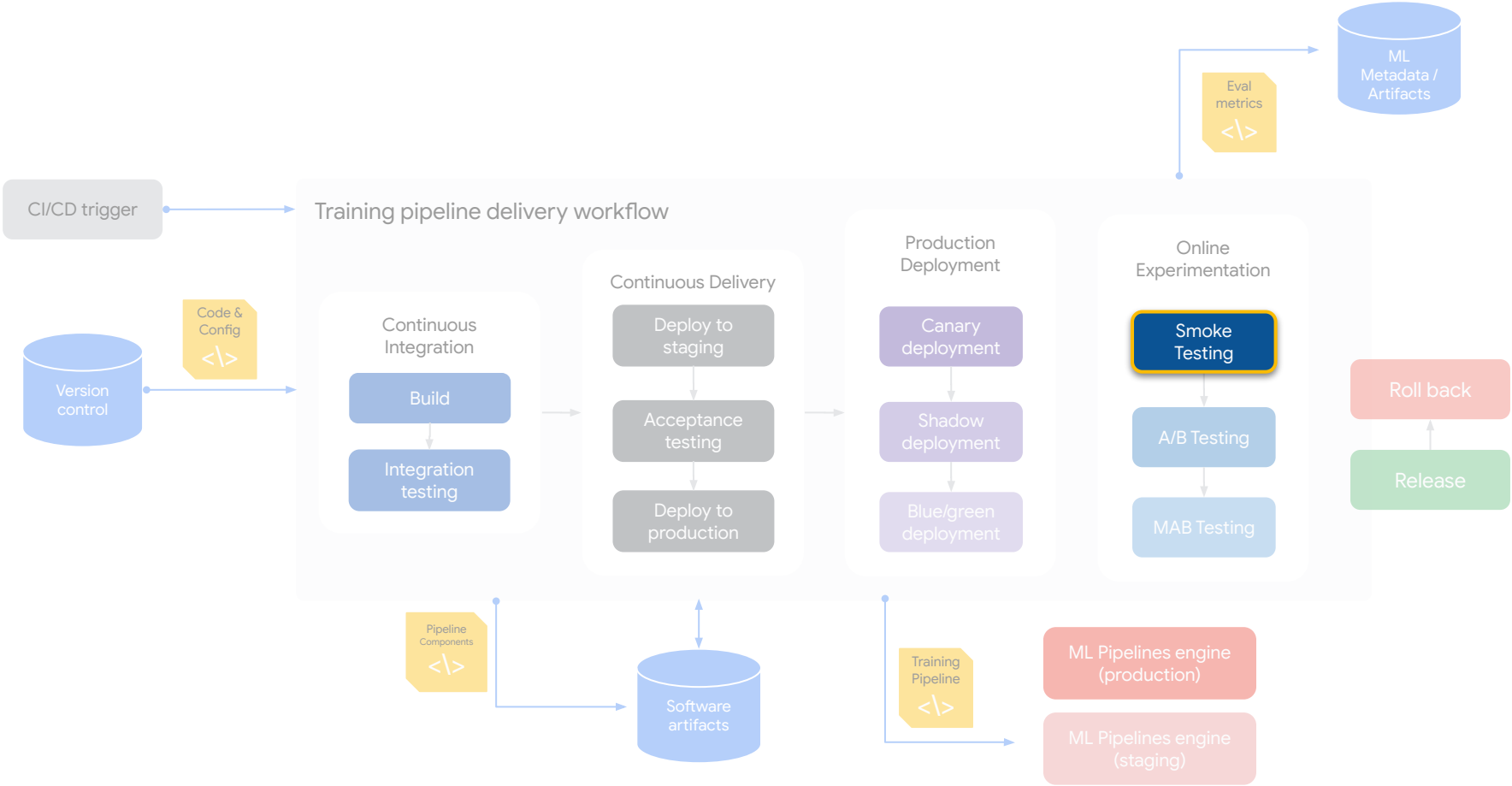

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Smoke Tests

The word "smoke testing" is thought to have originated in the **plumbing** profession, where smoke is commonly used by plumbers to **check for leaks** and breaks in pipe systems.

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Smoke Tests

The word "smoke testing" is thought to have originated in the **plumbing** profession, where smoke is commonly used by plumbers to **check for leaks** and breaks in pipe systems.

Another believe is that the word comes from **hardware testing**, in which a gadget is inspected for smoke from its **components** when it is initially turned on.

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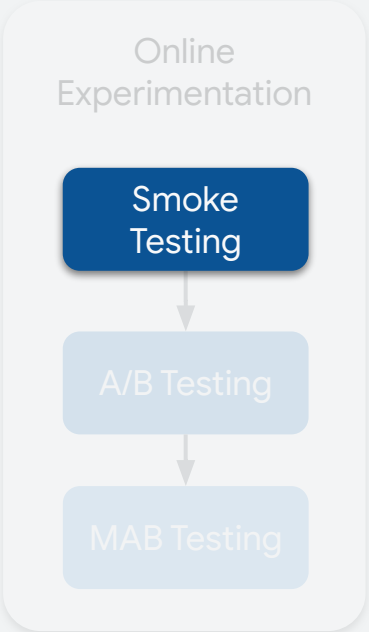
Smoke Tests

- As part of the build verification testing (**BVT**) process, test the application's key features
- This is non-exhaustive testing with a small **sample size**. Smoke testing is usually done with valid data and positive situations.



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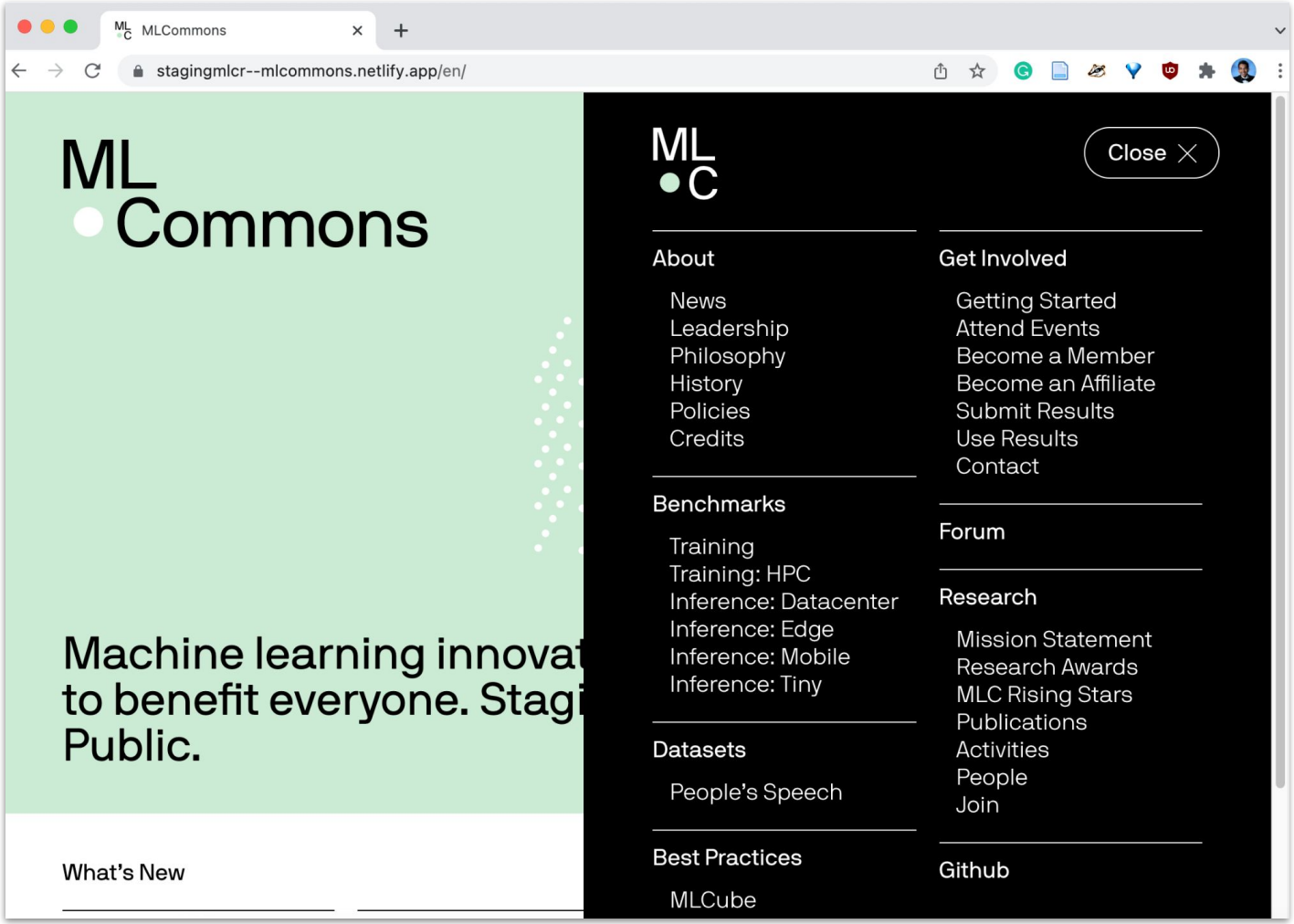

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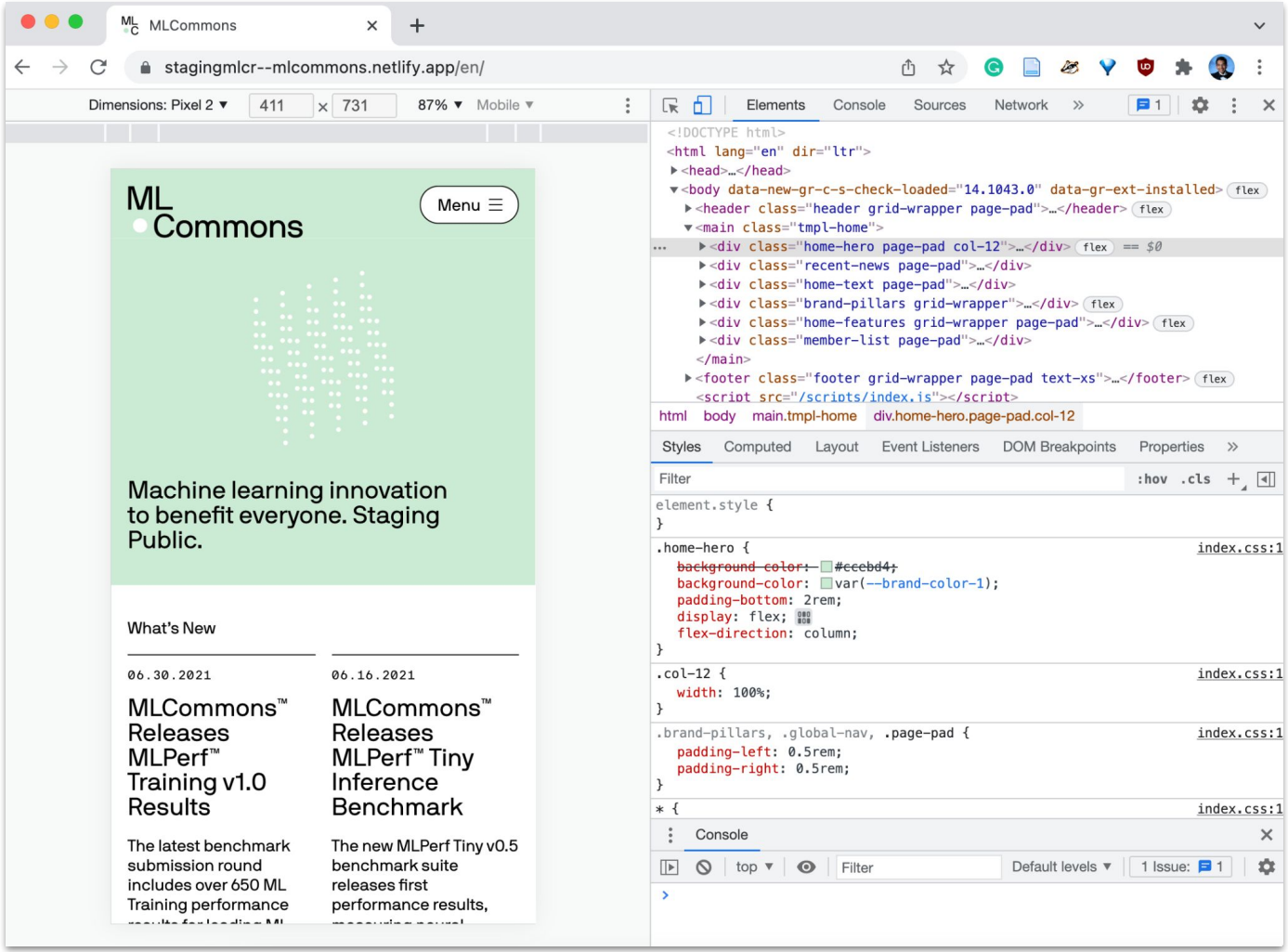

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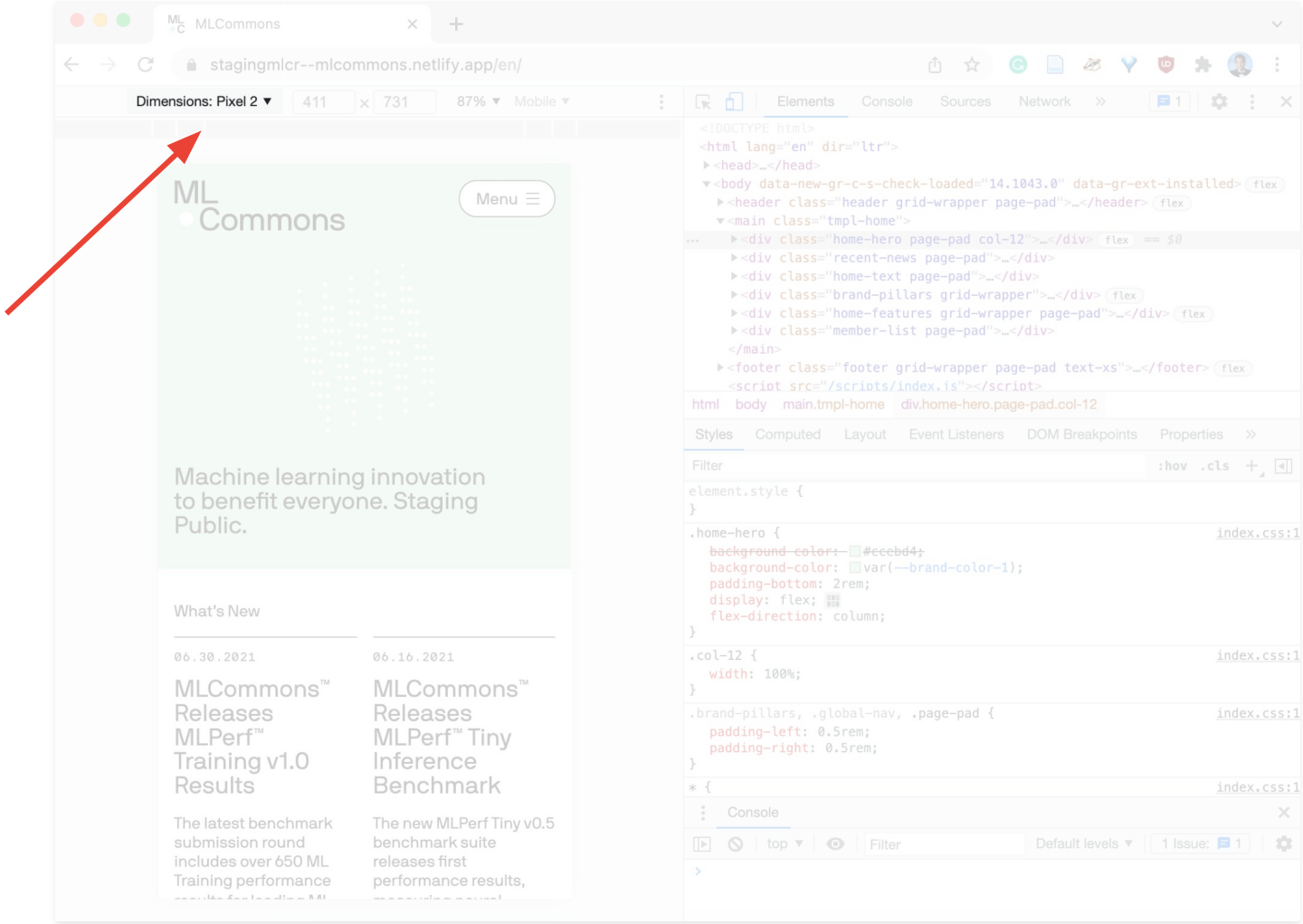

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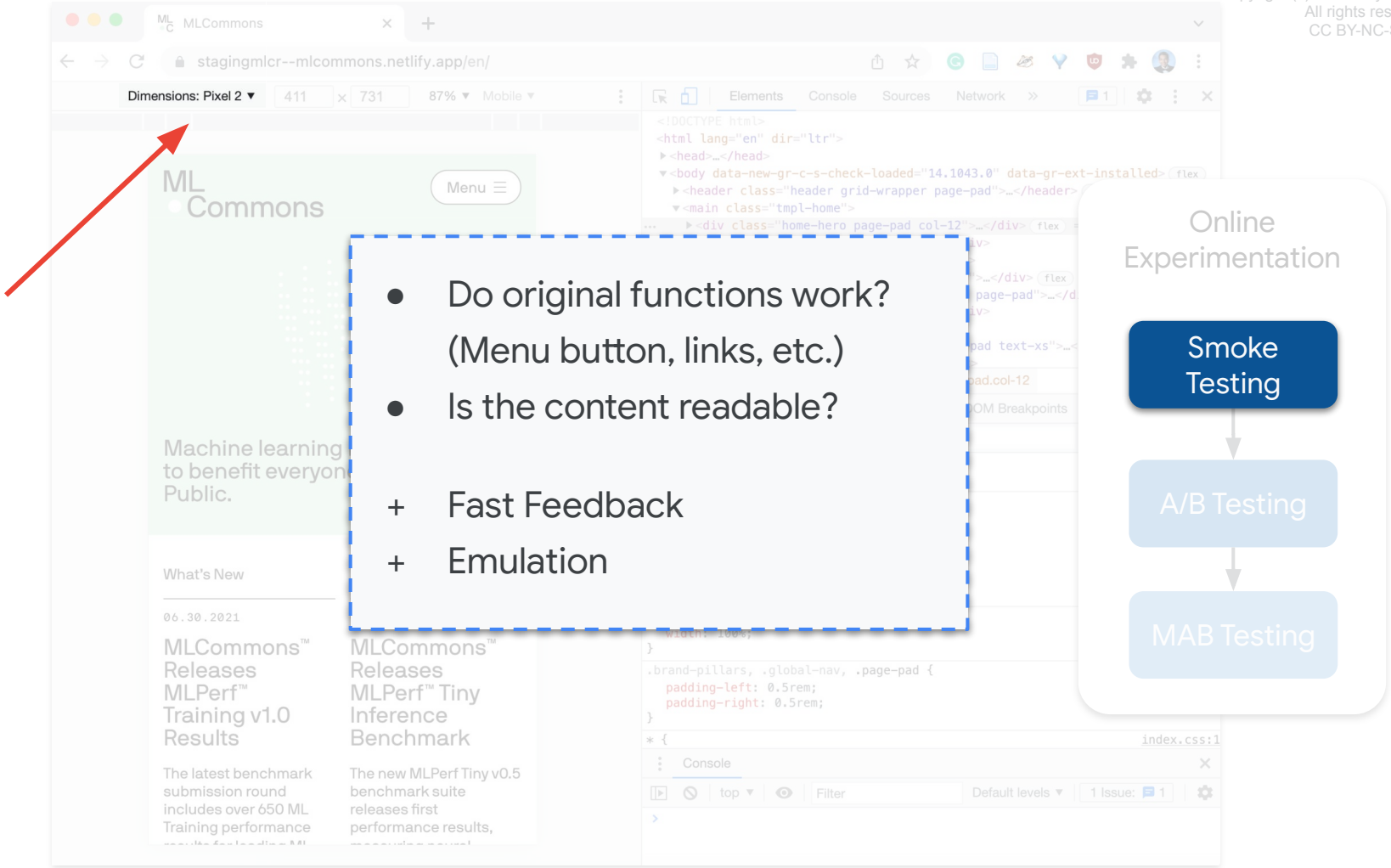

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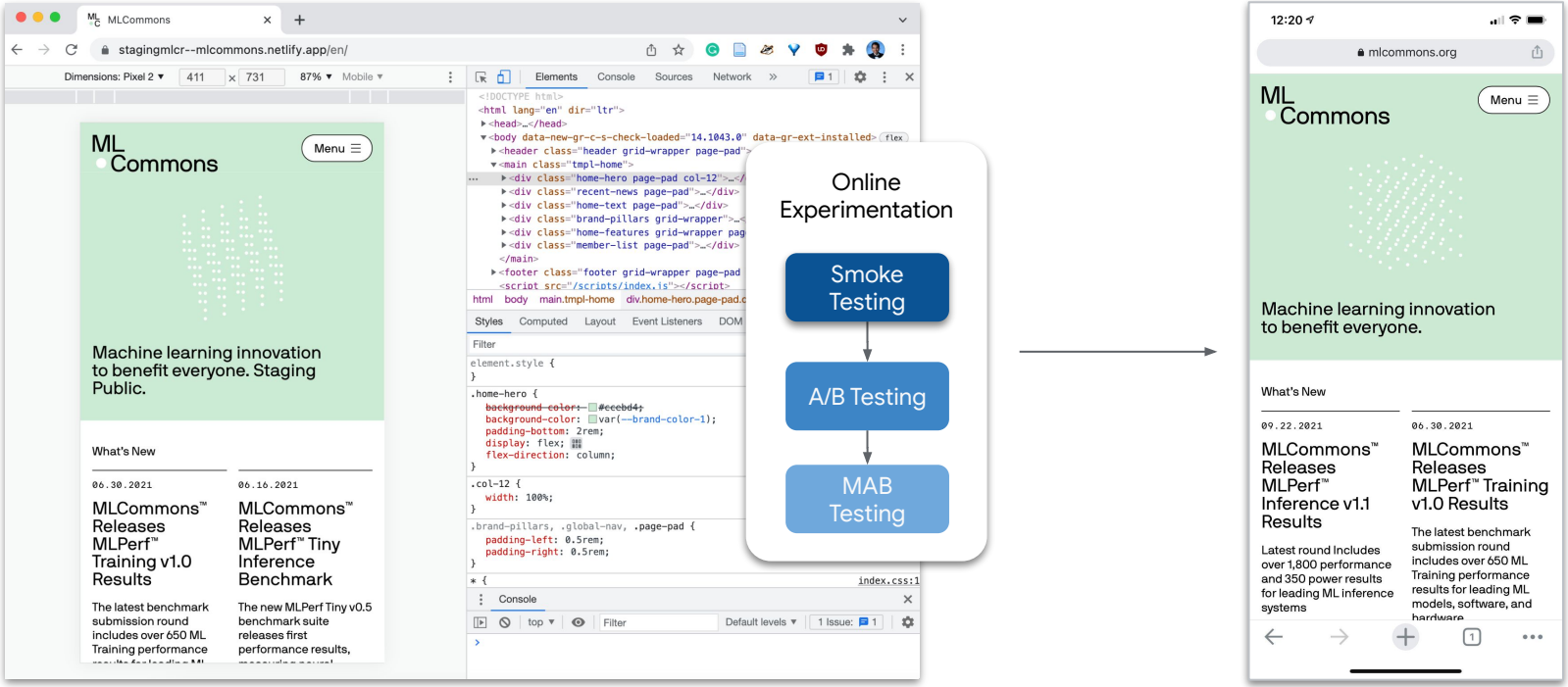

Release

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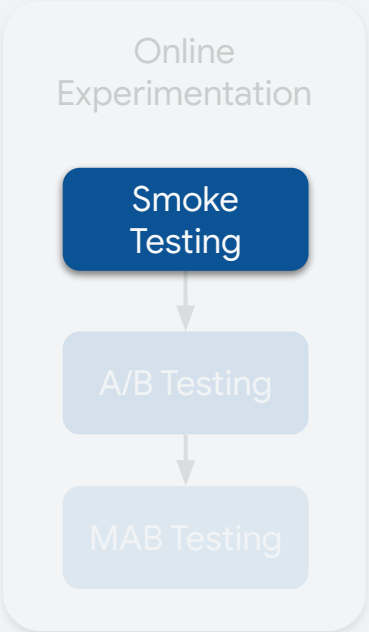
TinyML Production Deployment Questions

- What does it mean to do a smoke test for ***embedded*** machine learning systems?
- How can you do a production release with **TinyML** devices?



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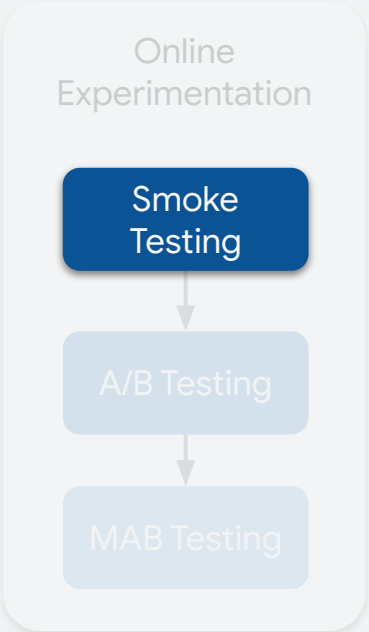
TinyML Production Deployment Questions

- **Recall:** what should we test?
  - Code
  - Model
  - Data
  - Sensors



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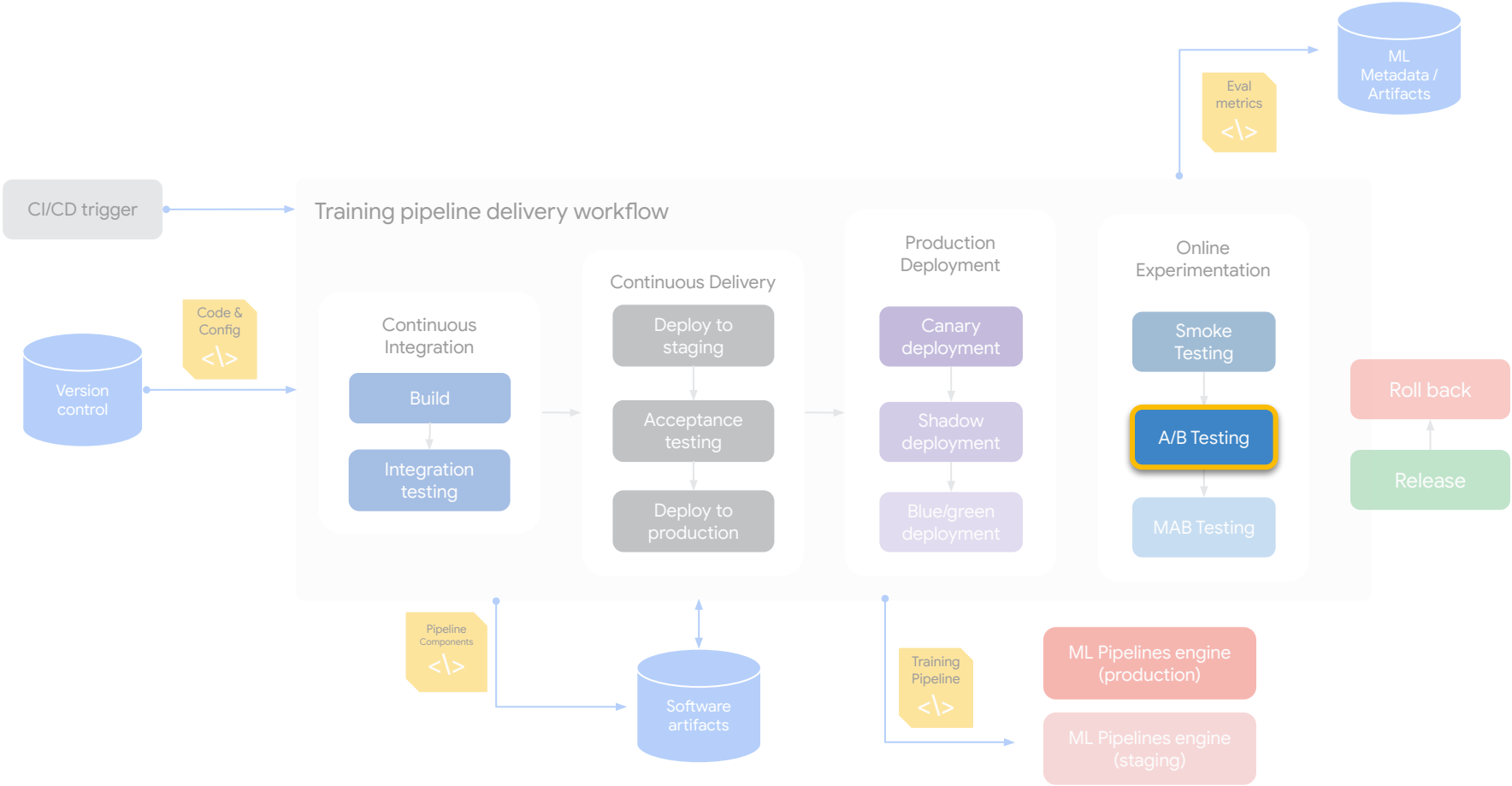

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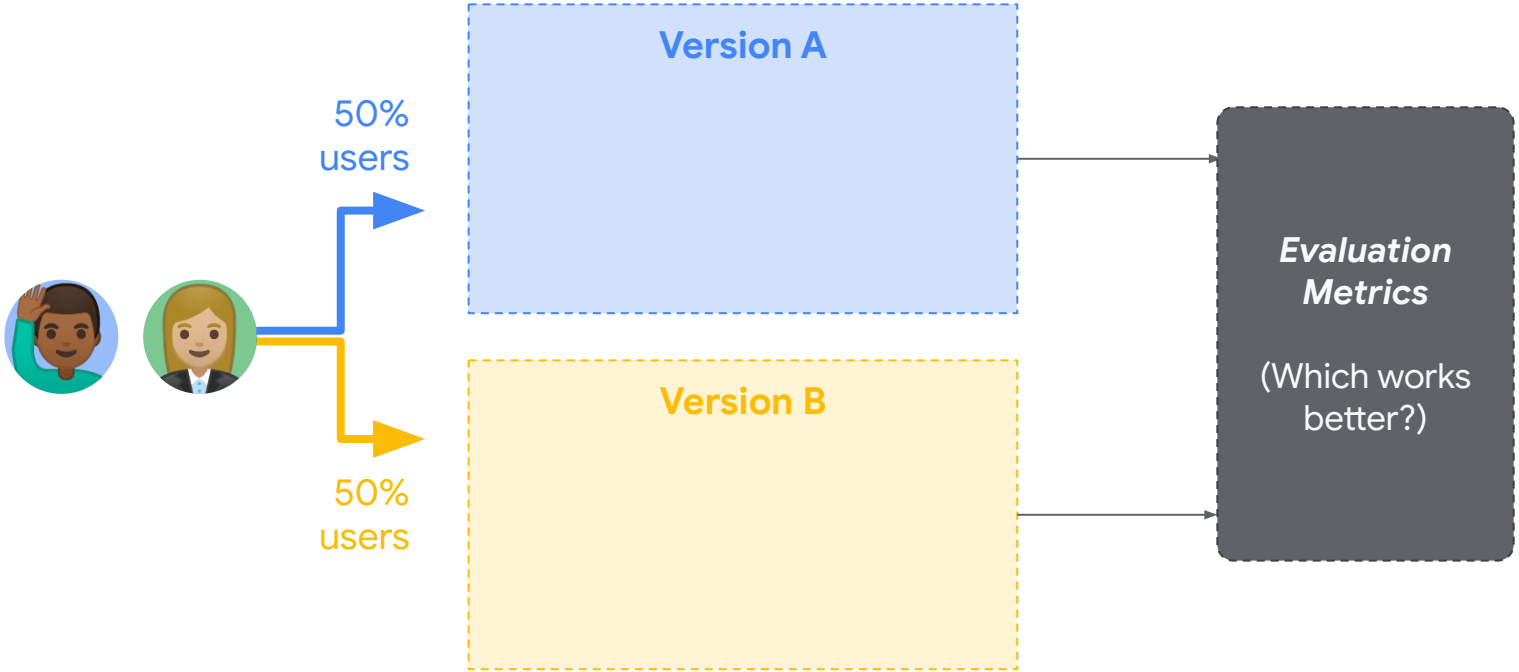
A/B Testing



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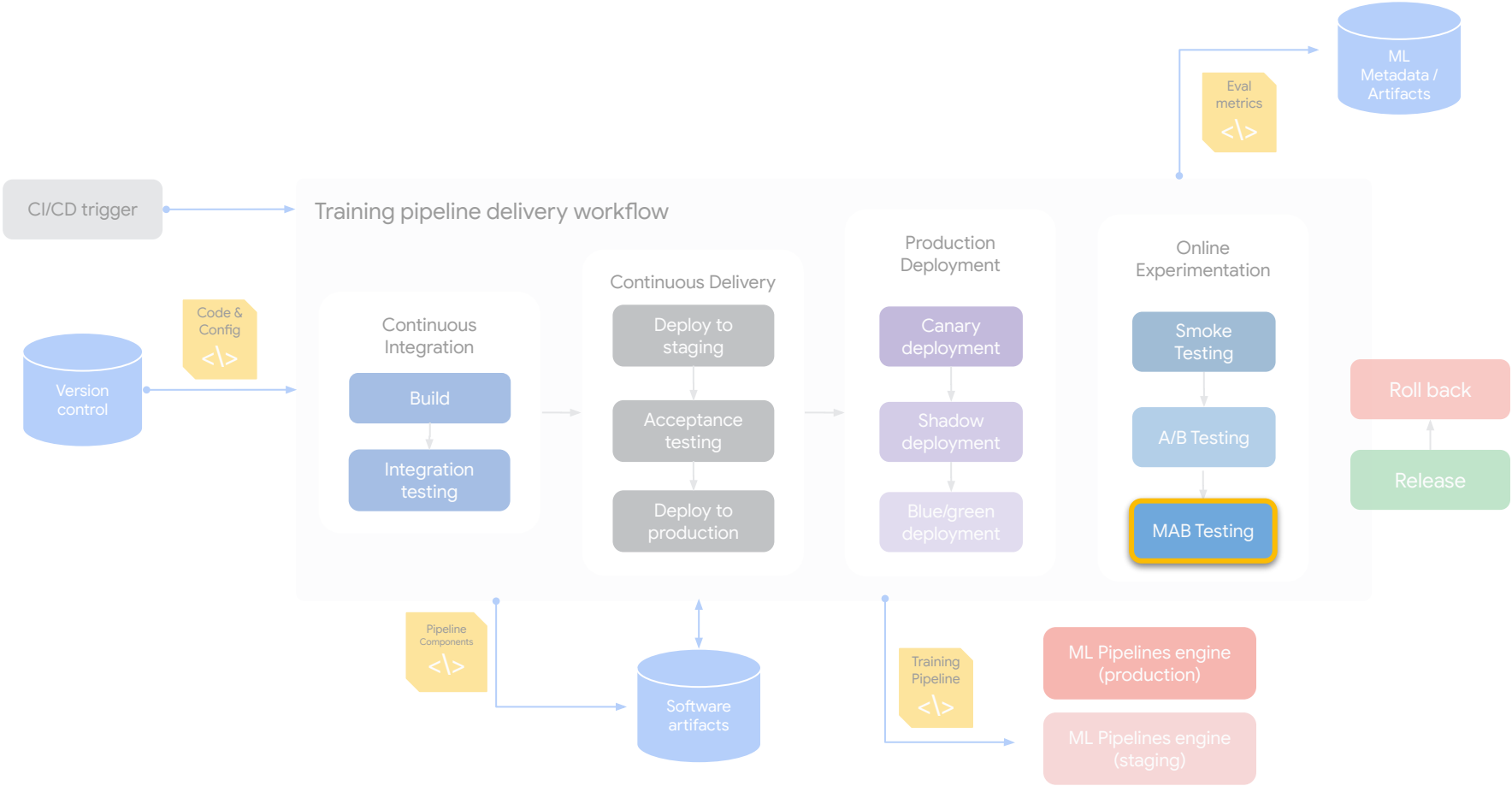

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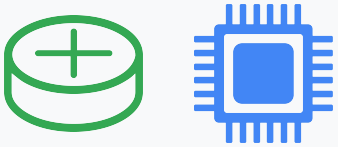
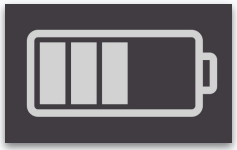
Challenges for TinyML

Connectivity

Latency



Limited Devices



Battery

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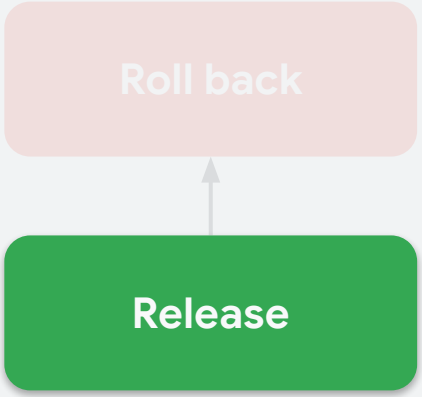
Release Strategy

- **Controlled** strategy for rolling out the models into **production**
- Need to be **robust** for fail-safe
- Important to have some **rollback strategy** for audit