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Introduction to Visual Regression

Visual Regression: Ensuring UI Consistency in Software Development

DEFINITION

> Visual regression is a testing technique that compares visual changes in software interfaces. It helps ensure that updates do not unintentionally alter the appearance of an application.

KEY CONCEPTS

Screenshot Comparison

Visual regression testing involves taking screenshots of the UI and comparing them to baseline images.

Baseline Images

Baseline images are the reference screenshots that represent the expected appearance of the application.

Automated Testing Tools

Tools like Percy and BackstopJS automate the process of capturing and comparing screenshots.

Pixel Differences

The testing process identifies pixel-level differences between the current and baseline images to highlight visual changes.

Threshold Settings

Threshold settings determine the acceptable level of visual difference before a test is considered a failure.

EXAMPLES

→ Comparing a website's homepage before and after a redesign.

→ Checking that a button's color remains consistent after a code update.

→ Validating that a mobile app's layout is unchanged after a new feature is added.

MEMORY TIPS

★ Think of 'Visual' as 'View' to remember it's about appearance.

★ Use 'Baseline' as a reference point, like a starting line in a race.

★ Remember 'Pixel' as the smallest detail, crucial for visual accuracy.

COMMON MISTAKES

✗ Neglecting to update baseline images after legitimate changes.

✗ Overlooking minor pixel differences that could affect user experience.

✗ Relying solely on visual tests without combining them with functional tests.

QUICK RECAP

Visual regression testing ensures UI consistency by comparing current screenshots to baseline images. It helps catch unintended visual changes that could impact user experience.