Software Development Internship

Regression Test Campaign analysis optimization

Duration: 6 month

Location: Sophia-Antipolis

Start Date: ASAP

About us

As part of a multicultural English-speaking team, you will work with engineers of the rates team of hospitality division of Amadeus.

At Amadeus we're powering better journeys through travel technology, creating the new and unexpected in the world of travel. And so can you!

We're a global team of over 19,000 professionals of 150 nationalities, working across 190 countries.

Join us to add your voice to our diverse mix for better discussions, decisions and outcomes for everyone.

Mission Context

This internship project in the Quality Assurance (QA) team is centered around creating a tool or solution to streamline and automate the regression testing analysis process. Below is an outline of the key aspects of the internship and its goals:

- **Objective**: The aim is to improve the efficiency of automated regression test analysis. The current process involves significant manual effort from QA engineers to determine whether a test failure is new or a recurrence of a known issue.

- **Challenge**: With large test campaigns, manually identifying recurring failures consumes time, reducing the time engineers can spend on analyzing new, critical failures.
- **Solution Goal**: Design and implement a solution that automates the identification of known failures, thus accelerating the analysis process and allowing engineers to concentrate on new and real issues.

Internship Objectives

As an intern, your contribution will include:

1. **Analyzing the Existing Process**:
    - Study the current workflow followed by QA engineers during automated regression test analysis.
    - Identify manual steps that consume time and could benefit from automation.
2. **Understanding QA Engineers' Needs**:
    - Engage with QA team members to gain insight into their specific requirements for identifying test failures.
    - Collect feedback and requirements to shape the technical solution.
3. **Proposing and Developing a Solution**:
    - Based on your understanding, propose a technical solution that meets the identified needs.
    - Develop the solution to automate the classification of test failures (new vs. known).
    - Ensure the solution integrates well with the existing QA processes and tools.

Key Activities During the Internship:

- **Process Mapping**: Understand and document the regression test analysis workflow.

- **Data Collection**: Gather information from previous test runs to identify patterns in failures.
- **Pattern Recognition**: Use techniques like pattern matching, logs comparison, or AI/ML to differentiate between new and known failures.
- **Prototype Development**: Build a working prototype or tool that can automate most steps of the regression test analysis.
- **Collaboration**: Work closely with mentors and QA engineers to validate the solution.

Technical Skills Likely Required:

- Programming (e.g., Python, Java, or any scripting language used in test automation).
- Familiarity with testing framework used (readyAPI).
- Knowledge of test management and CI/CD tools (e.g., Jenkins).
- Knowledge of REST/Json API communication
- Data analysis, potentially leveraging pattern recognition or machine learning (depending on complexity).

Outcomes:

- A functional tool or process that significantly reduces the manual steps in identifying test failures.
- A report/documentation detailing the solution’s design and how it addresses the QA engineers' pain points.

This internship will provide experience in both software development and the intersection of QA processes and automation, with guidance from experts in the field.