

Comparative Analysis of Mobile Application Architectures

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Description of the measurement strategies:

Development and Maintenance Metrics: This strategy involves measuring the development and maintenance effort required for applications built using different architectures. Metrics such as development time, code complexity, maintainability, and ease of adding new features can be assessed. Historical data, code reviews, and developer feedback can be used to gather relevant information.

Cost Metrics: This strategy aims to measure the cost-effectiveness of different architectures in terms of development, deployment, and maintenance. Metrics such as infrastructure costs, licensing fees, and development tooling expenses can be collected and compared. Financial analysis and cost estimation models can be utilized to evaluate the overall cost implications of each architecture.

Performance Metrics: This strategy focuses on measuring the performance of mobile applications built using different architectures. Key metrics such as response time, latency, throughput, and resource utilization can be collected and compared. Performance testing tools and frameworks can be used to simulate different scenarios and workload patterns to obtain reliable performance data.

Strategy for the Data Collection. Links to the dataset (could be external or in your repo)

Experimental Data: In this project, I will conduct controlled experiments by implementing the same mobile application using different architectures. Our goal is to collect data on various performance metrics, user experience, and other relevant factors. To gather this data, I will integrate appropriate instrumentation and monitoring tools into the application.

Open-Source Mobile Applications: I will explore existing open-source mobile applications that are built using different architectures. I will use these applications as test cases to gather data on performance, user experience, and other relevant metrics. Publicly available repositories like GitHub can be searched for open-source mobile applications.

Visualization of the data. You need to describe your number visually and have one separate page for the visual storytelling.

I can compare the development effort required for each architecture, measure in requests per second, demonstrates how well each architecture handles concurrent requests.