Proof of Concept, FinBro Application

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1 Introduction

This document serves as a proof of concept for the development of the web application FinBro. This artificial-intellingence based financial assistance will give users the necessary structure to make their own informed financial decisions.

2 Problem Statement

The challenge is to tackle the low level of financial literacy among people. Around 48% of individuals worldwide struggle to participate responsibly in the financial arena due to a lack of knowledge and tools that tailor the learning curve to each person's personal goals and profile, decreasing overall engagement and motivation, and feeding the bubble of irrational behavioral patterns.

3 Proposed Solution

We propose to develop an app that allows users to, through an initial assessment test, have a tailored experience with a FinBro, that will assist them through actions that range from providing an overview of their account movements and recognizing patterns, to offering a personalized roadmap for topics that prove themselves necessary to be learnt before making specific financial decisions, and keeps you updated on the market news that might affect your profile.

FinBro will never tell the user what decision to make but will provide them with guided lessons and tools that will make the user capable of making an informed decision alone, also adapting its language based on the user's proficiency in the topics.

The user will be motivated to learn by a series of different features, such as a highly successful marketing model inspired by Spotify, namely 'FinBro wrapped'; a ranking that allows you to connect with your friends and compete in terms of financial literacy; a special tool that allows you to experiment different investment portfolios leveraging risk and profit utilizing only the financial instruments you have unlocked during the lessons.

4 Implementation Plan

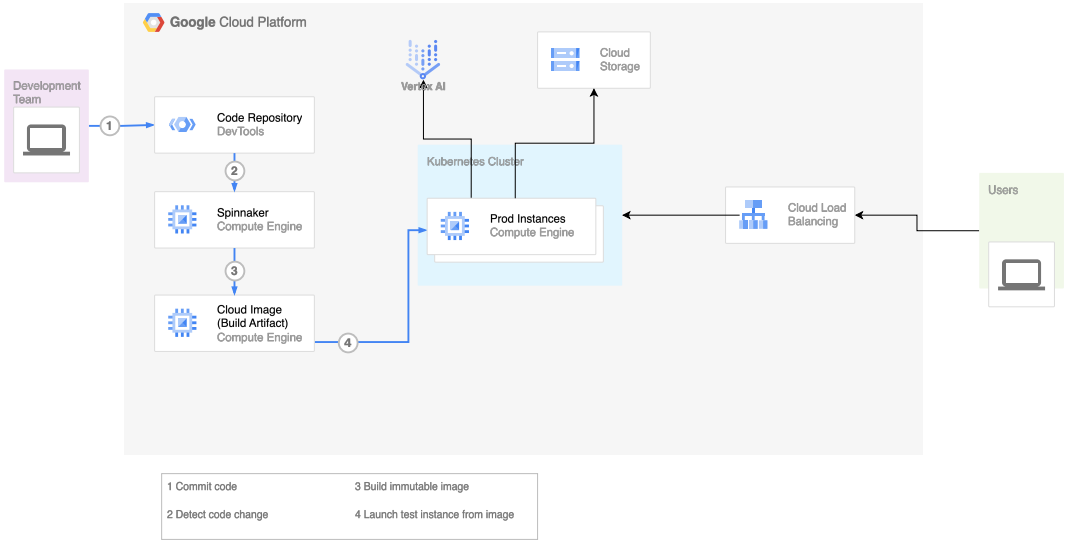
To evaluate the profitability and consequent success of our proposed solution, we have utilized the NPV (Net Present Value) criterion in the time span of 5 years, wherein the sum of cash flows over the years is calculated, discounted to present value, and the investment is deemed successful if the final value is greater than or equal to zero. To do so, we proceed to make a detailed estimate of the

profit and costs of such implementation, considering that some features that would interest a more loyal user profile (such as one of the assistants and portfolio optimization tool) would be accessible only through a membership of 2€ per month, therefore providing an ad-free experience that still maintains the app profitable. Another source of profit will be the one from partnerships with brokers. To evaluate the success, we also considered factors such as potential impact reachability, and inclusivity.

5 Proof

The MPV provided shows the proficiency of the LLM developed in assisting the user case provided by tailoring its answers and analysis to the user's needs. Finally, the **NPV comes out to be 2'177'000€**, making it a good investment.

Here is also the architecture behind our LLM model: we used a Kubernetes Cluster with two nodes in order to scale our application automatically and be resistant to system failures. To store data securely we chose Cloud Storage, and to run the model efficiently we used VertexAI and finally to distribuite the user's requests we inserted a load balancer.



1 Commit code
2 Detect code change
3 Build immutable image
4 Launch test instance from image

6 Conclusion

The proposal is both profitable, and aligned with the challenge's requirements: from an economic point of view,**fintech apps have a current CAGR (compound annual growth rate) is 23,5%, while AI has a CAGR of 19,1%**; furthermore, the NPV is positive and rather high, and the app's focus is stable enough to guarantee a constant performance and popularity regardless of market crisis.

The app is inclusive, informative, and represents a viable successful solution to the dilemma of financial illiteracy among all user profiles worldwide.