

Implementation

Key Tools, Frameworks and APIs: Xcode, Swift, Python, Flask, Alpaca, Plaid, Sketch

EazyMoney uses Swift for the native iOS application. All UI elements were created in Sketch and exported as png files. We use several APIs to boost user security, app efficiency and speed. *Plaid* was used for bank account and wealth management, whereas *Alpaca* was used for Stocks and ETF investment and trading. Several cocoapods like Alamofire were used to aid the development process. There is also a companion iPadOS app and macOS Native Application, which will be useful given the Apple Silicon transition.

To enhance user security, instead of using Cloud-based Database services like Firebase, we utilise the native CoreData framework for persistent storage.

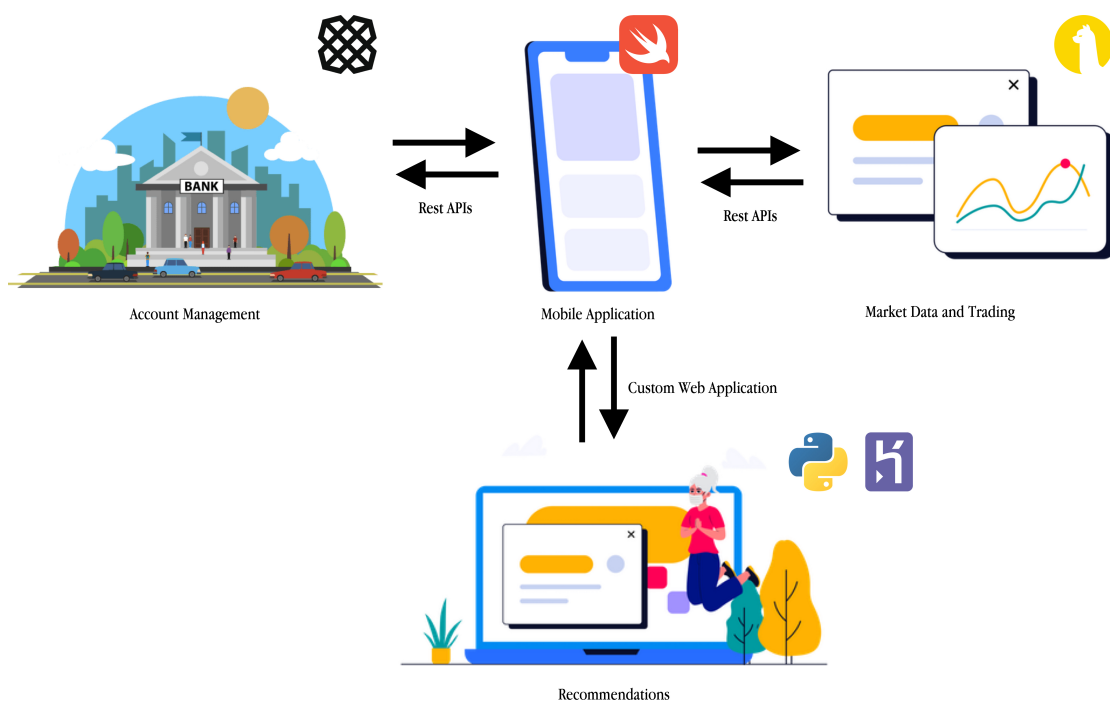


Figure: Technical Framework

For Machine-learning based recommendation, we use a custom-developed Flask API deployed on Heroku that utilises real Stock Data and key financial indicators, used by analysts, to develop a real-time cluster of stocks in the exchanges. Educational content was pulled from the internet using web scraping and rendered natively.

We used Final Cut Pro X and Screen Recording from an iPhone for the demo video. Supporting clips were either shot by camera to used with permission from free stock gallery.

The mobile app is responsive and conforms to the Apple Human Interface Guidelines. All screen sizes supported by iOS 14.0+ are also supported by EazyMoney.