

Voice Recognition in banking.



Project Summary



User Research



Implementation Plan



Project Summary

Key Features

Summary

The aim.

The aim of this project is to successfully implement a facial recognition system into a bank's mobile application.

Purpose.

A successful project will **decrease friction in customer experience, increase efficiency** and make them more successful in the future.

Accuracy and Speed.

-  To achieve **efficiency**, the system must identify the user in real time.
 - Usage of **cascades** to minimize operations and optimization of system through testing and iterations.
-  For a good UX, system must overcome factors such as bad lighting and/or camera quality.
 - Testing scaleFactor in function, turning images to grayscale, increasing brightness if required. FR must be an alternate verification method, password must always be an option too.

Liveness Detection.

-  A **risk** that needs be overcome is that people could just use a picture of you to access your account.
 - Implementation of **liveness detector** in face recognition software (like Apple's Face ID does. Furthermore, automatically log a user out if they are logged in on another device.

Safeguards.

-  Decreasing customer friction requires that the system is not vulnerable to data breaches.
 - Usage of **administrative, technological, and physical safeguards** must be implemented and tested (eg. encryption etc.)
-  For a good UX, **integrity and access** must be a priority in the implementation of the system.
 - Allow users to be able to change their data (update perhaps incorrect information) and/or delete their facial recognition data.

Transparency and consent.

-  Users must trust the bank with their biometric information, **transparency and consent** must be prioritized for a good UX.
 - Transparency** – Provide users with meaningful information of how the data will be used and stored.
 - Consent** – Not everyone will feel comfortable sharing this information, get consent from each users before implementing.



User Research

Relevant User Personas

Michael Adams
28 • Pioneer



- ✓ Tech Savvy + relies on smartphone for most transactions.
- ✓ Relatively good wage.
- ✓ Willing to take risks to improve his life.
- ✓ Trusts institutions but is nonetheless likely to change banks.

Liz Bloomberg
35 • Pragmatist



- ✓ She conforms as long as she is being provided what she needs.
- ✓ Average wage for her age group.
- ✓ She is broadly satisfied with her bank provider.
- ✓ She trusts her bank but is cautious about her data privacy.

John Phillips
48 • Skeptic



- ✓ He is not always very happy with the service provided by the bank.
- ✓ High salary and very cautious with his money.
- ✓ Tech wary and difficult to convince.
- ✓ Frustrated with customer service.

Agnes Maynard
77 • Traditionalist



- ✓ Gradually losing trust in her bank provider.
- ✓ Average pension but has a lot of savings in her account.
- ✓ Usually doesn't use applications and is very tech wary.
- ✓ Very cautious about security, open to making changes to improve it.

Opportunities and User Stories

Michael

How might we ensure pioneers like Michael build **trust** with the bank and make them feel we **improve their life**?



As Michael, I want to use accurate facial recognition without risks so that my day to day life is more efficient.

Accept Criteria

- ✓ Real-time detection and verification.
- ✓ Accurate liveness detection, pictures of user should not be accepted.
- ✓ Adaptable to lighting/camera quality.
- ✓ Password protected too.

Liz

How might we convince pragmatics like Liz that the FR system will **improve her data privacy and efficiency**?



As Liz, I want to understand how my biometric data will be used so that I feel comfortable using it and benefit from its efficiency.

Accept Criteria

- ✓ Customer satisfaction with transparency.
- ✓ Open information to how the data is stored.
- ✓ Database highly protected from data breaches.

John

How might we remove the doubt in skeptics like John that the FR system will **not compromise their privacy**?



As John, I want to have easy control over my biometric data so that I am not skeptical about its missusage and satisfied with my privacy.

Accept Criteria

- ✓ Ask for clear consent before implementation.
- ✓ Ability to easily update their biometric information.
- ✓ Ability to easily delete their biometric information.

Agnes

How might we **regain the trust** of traditionalists like Agnes and allow her to **feel at ease** with the FR Tech?



As Agnes, I want an application that is easy to use and secure to so that I can easily and safely access my financial information.

Accept Criteria

- ✓ Seamless face detection that requires minimal interaction.
- ✓ Accurate liveness detection, pictures of users should not be accepted.
- ✓ Database highly protected from data breaches.

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Implementation Plan

The team

1 Project Manager

Plan project, estimate cost and supervise every sprint process.

2 IT Architect

Plan project, estimate cost and supervise every sprint process.

3 AI Developers

Deep learning skills to optimize the recognition network.

4 UX Designers

To create an accessible UI and carry out user research.

5 Android Developers

Java/Python skills for app on Android mobile devices.

6 iOS Developers

Swift/Python skills for app on iOS mobile devices.

7 Testers

Carry out efficient testing and even test driven development.

8 DevOps Engineers

Oversee code releases and deployments.

The plan

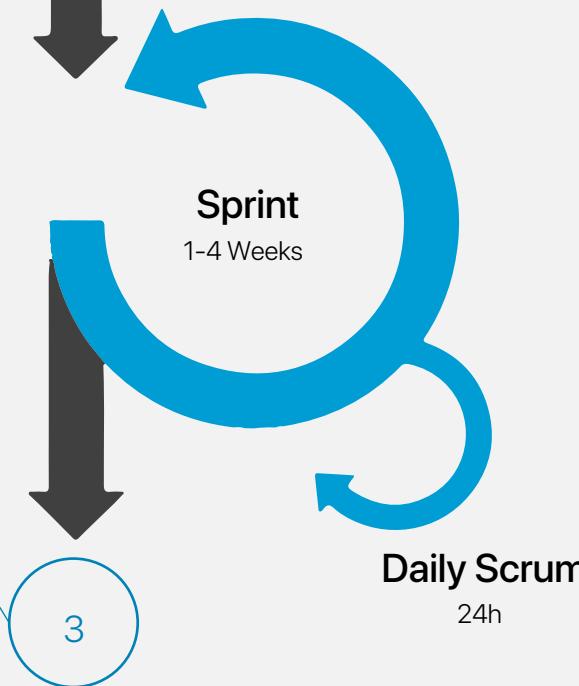
Features Backlog

1. Accurate face recognition system.
2. Implementation of liveness detection.
3. Increasing cybersecurity of database.
4. Designing UI Interface for control and consent to FR System.



Sprint Backlog

To track the progress of each sprint and the implementation of the features.



Feature Release

Final check by DevOp engineer. Implementation of feedback gathering system for continued iterations.

