

FACIAL VERIFICATION SERVICES IN BANKING APPS

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FACIAL VERIFICATION SERVICES IN BANKING APPS

Aim:

Aim of this project is to design and develop an effective and efficient facial verification system in banking app that all users can use in order to access the bank details in a safe and optimal manner, without having to worry about risks of data theft.

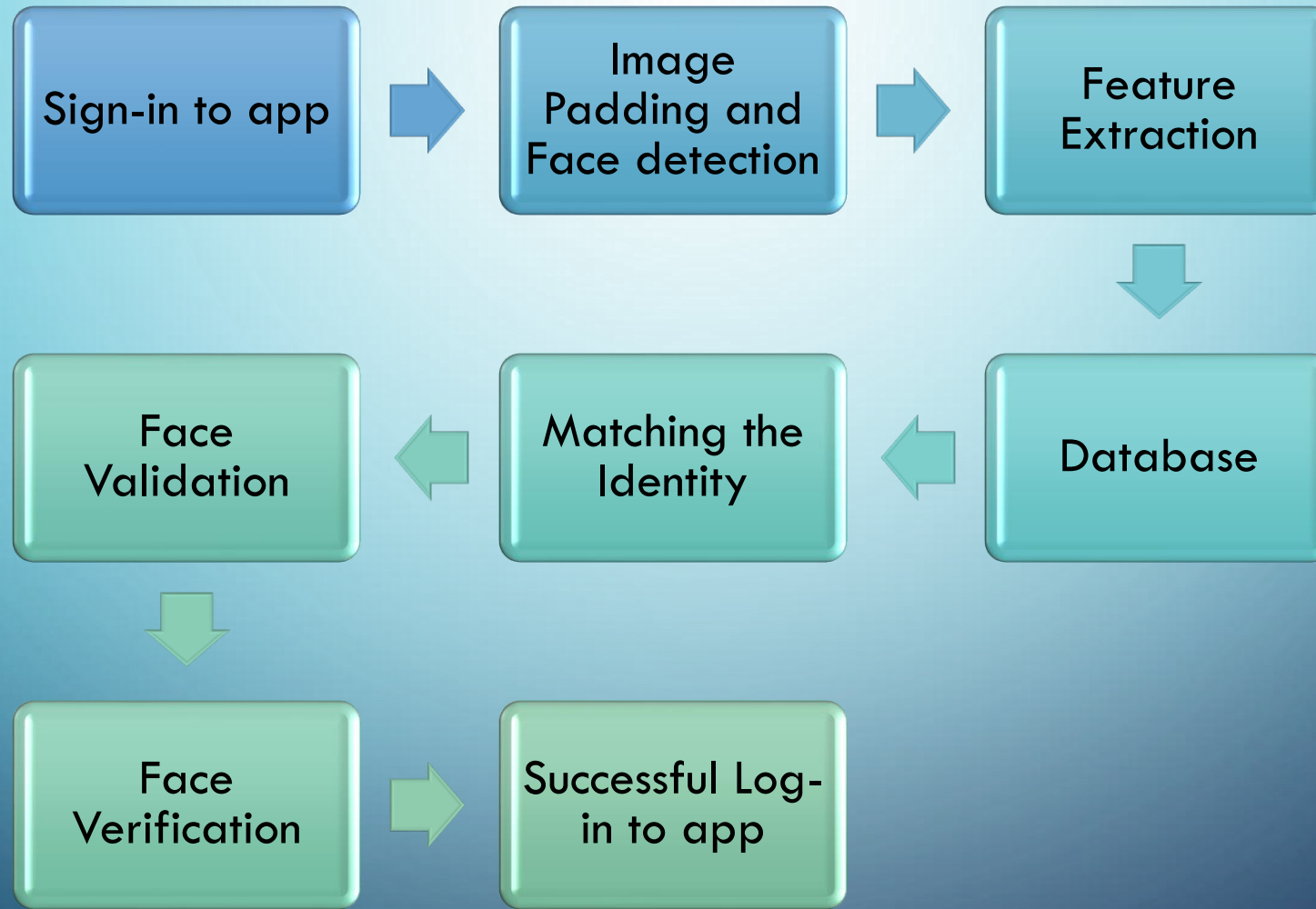
For Success:

- Develop in Agile methodology with Scrum
- Testing and Implementing continuously throughout development (SDLC)

SUMMARY:

- People don't need banks anymore, what they need is banking.
- AI, Machine Learning and other Technologies can increase the efficiency and accessibility of the customer experience.
- Computer vision (OpenCV) for Image acquisition, Machine learning for Image and content classification with Python used in this app.
- Quality control of respective database while using face verification app and can use biometric and PIN technology and Password as well for multifactor authentication.
- Security and Protection of Banking app are being used to protect from data misuse .

FLOWCHART :



CRITICAL FEATURES OF FACIAL RECOGNITION APP FOR BANKING

- **On-location Security:** Preventing unauthorized personnel from gaining entry to certain areas of a bank and catching suspicious behaviour on camera.
- **Identity Verification and Account Withdrawals:** Allowing customers to make withdrawals from their bank accounts at ATMs.
- **Using mobile banking apps:** Authenticating customers to make payments and net banking and other services.

Security Issues/ Risks using Facial recognition app :

Facial recognition is considered among the most effective and convenient type of biometric modalities

Security	Prevalence
Facial data can be collected and stored, often without your permission. It's possible hackers could access and steal that data.	Facial recognition technology is becoming more widespread. That means your facial signature could end up in a lot of places. You probably won't know who has access to it.
Ownership	Safety
You own your face — the one atop your neck — but your digital images are different. You may have given up your right to ownership when you signed up on a banking mobile app.	Facial recognition could lead to online harassment and stalking. How? For example, someone uses facial recognition software to find out exactly who you are.
Mistaken identity	Basic freedoms
Say, for instance, Banking sector uses facial recognition to try to identify someone who was indulged in fraudulent activity.. Facial recognition systems may not be 100 percent accurate. What if the bank thinks the suspect is you?	Banking agencies and others could have the ability to track you. What you do and where you go might no longer be private. It could become impossible to remain anonymous.

USER STORIES:

User Stories	Acceptance Criteria	Level of Difficulty
1. As a busy user, I want a fast reliable sign-in process so that I can log-in to app quickly and easily.	<ul style="list-style-type: none">• Face verification time must be less• Should have an accuracy more than 95%• When app opens face verification should occur immediately• Face detection can be done from multiple angles• If verification fails, try using default sign-in Process	High
2. As a new user I want a simple registration process. So I can easily activate facial verification bank app.	<ul style="list-style-type: none">• Pop-up window should appear on screen asking to access face verification in app• Setup should be less than sec• Instructions should be clear and step-by-step, can be easily follow UI• If device is not compatible, do not display any message.	High
3. For Security of user, user should be asked multi factor authentication. So that accounts are protected.	<ul style="list-style-type: none">• Option to activate extra existing security.• User can select which verification method to use	Medium
4. For joint account user, I want to use my partner's face identity verification as well, so that we both can sign-in	<ul style="list-style-type: none">• Option to add other faces to the verification system	Medium
5. As a common user, who is not confident tech user, can understand how this app works. So can feel comfortable using it	<ul style="list-style-type: none">• It should include Help button• A non technical summary of biometric authentication• It should include benefits and FAQ's	Low
6. As a Privacy conscious user, I want to ensure my facial profile data is secure and that I am not subjected to any fraud	<ul style="list-style-type: none">• Data should be stored n local device , not in bank server• Data should be encrypted	High
7. As a Privacy conscious user, I want to approve how my data is stored. So I can control of my personal information	<ul style="list-style-type: none">• In Pre-registration process, include the summary of how user data is stored• Add a check-box to opt-in and process during registration.	Low

PROJECT TEAM

- Product Owner
- Scrum Master
- AI and ML developers with deep learning skills
- UI designers
- Web developers with Node.js skills
- Android developers with Java skills
- iOS developers with experience in Swift
- Testers
- DevOps engineers

Development Plan:

- Define Key requirements for Sprint plan of app development
- Develop Project success guidelines to meet the desired quality of users.
- Design and work closely with UX developers to achieve the product
- Project methodology approach by designing project in Agile Methodologies and develop user stories and design in sprint
- Testing and releasing the project in SDLC to achieve user requirements.

SPRINT PLANNING:

Two week Sprint Planning

Sprint 1 - Challenge

- Plan and Develop Map structure to choose Target
- Design Automatic recognition of faces

Sprint 2 - Sketch

- Design and Construct database
- Process of connecting database to the end-point to access data





Sprint 3 – Choose/Build Prototype

- Choose and mount program onto a simple interference in the app
- Produce model to test

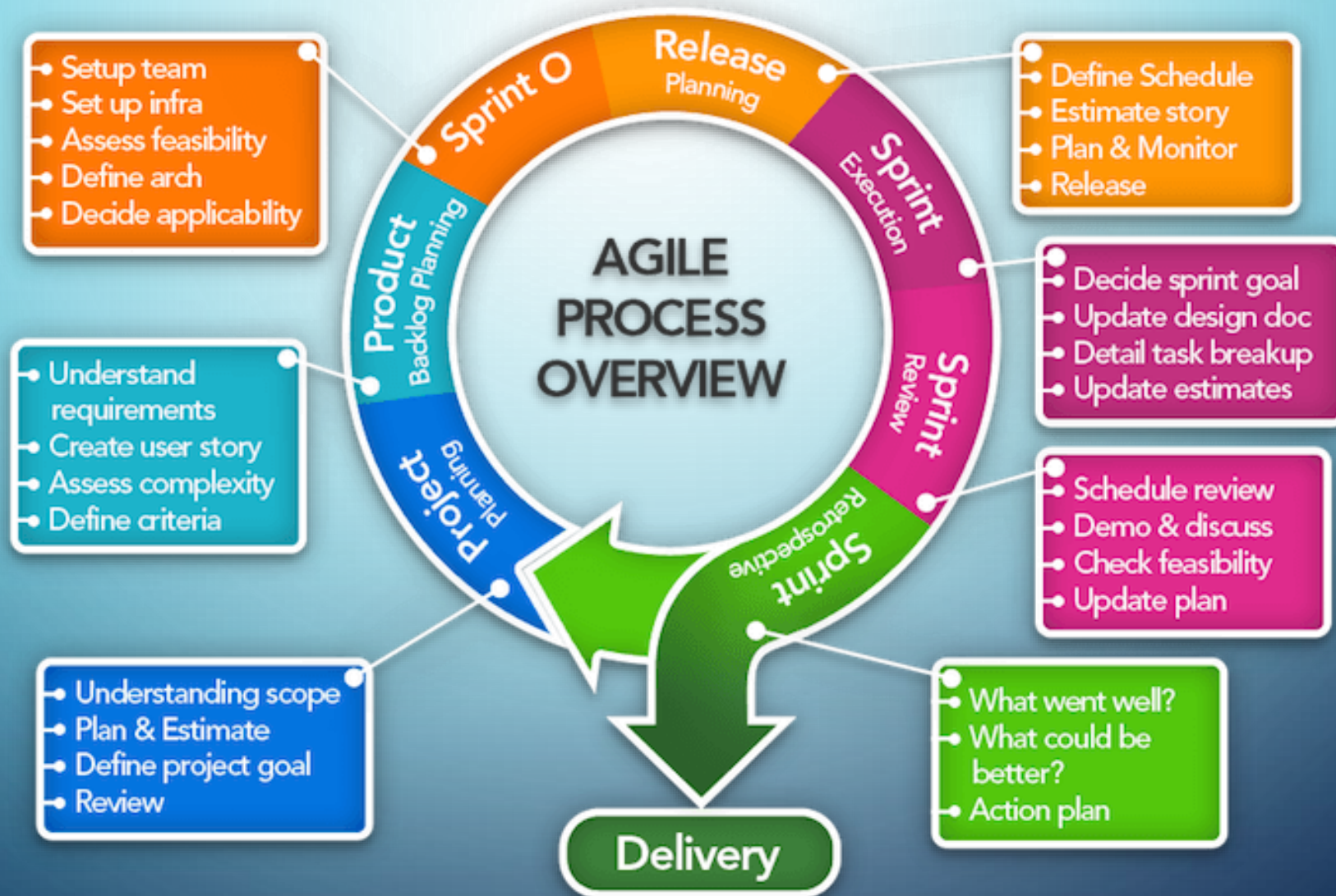
Sprint 4 – Test with end-user

- Build final Model and provide information asking consent form for First time user.
- Privacy and data protection agreement.

Sprint Planning chart (Project Release Plan):

	Sprint Planning							
	Week 1				Week 2			
	Plan Requirements		Build		Test/QA		Retrospect/Demo	
	Release Plan							
	Sprint 1		Sprint 2		Sprint 3		Sprint 4	
	Week 1	Week 2	Week 3	Week 4	Week 4	Week 6	Week 7	Week 8
Engineering	Core Software Build		Data store		Security/Data build		Additional Security features	
Design	Sign-in UX/UI design		Security/Protection		Registration of UI/UX design		Additional UX/UI design	
Release								
Notes	Internal demo for UI/UX 		Release to 10% users, track feedback 		Release to 10% users, track feedback 		Full release 	

AGILE PROCESS



COMMUNICATION PLAN:

Communication	Format	Frequency	Goal	Owner	Audience
Project Status Report	Email	Weekly	Summary of project status	PM	Principles, Project team and support team
Scrum	Meeting	Daily	Identify what needs to be done and what all accomplished.	PM	Project team
Team Meeting	Meeting	Weekly	Review product backlog, gather feedback and discuss next steps	PM	Project team
Sprint Review	Meeting	Pre/Past sprint	Planned Improvements	Tech team/PM	Project team
Stakeholder Meeting	Meeting	Bi-weekly	Project summary and progress presentation	PM	Principals and support team



Thank You