

# Revolut - Know Your Customer (KYC) Analysis Task

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# Contents

1 Task Summary

2 Assumptions

3 Report Breakdown

4 Document Check Analysis

5 Facial Similarity Check Analysis

6 Recommendations

7 Other Insight

# 1. Task Summary

## Situation

Revolut has an obligation to conduct KYC on any customers who wish to open a Revolut account. KYC checks are conducted by submitting a recent photo of the customer and a supporting ID document to a 3rd party service via API - managed by Veritas.

In the recent period, the success rate has declined significantly.

## Task

The purpose of this report is to identify the root causes of the reduced success rate and suggest solutions to address these causes.

## 2. Assumptions

- The KYC processed outlined in the task related to users opening Retail bank accounts
- User ID is the same as an “Applicant ID for a check” and can be used to link the two data sources together
- Both Document and Faces checks are submitted using a phone camera
- Photo checks are 'standard' as no 'liveness\_detection' or “spoofing\_detection is mentioned in the 'face\_reports\_sample.csv'
- This data relates to Revolut using a previous KYC partner and the current user journey using Onfido does not represent the user journey in 2017

### 3. Report Breakdown

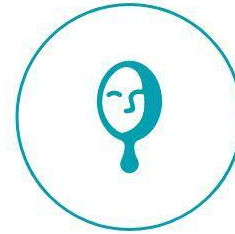
From high level analysis, the Document Check part of the KYC process produces a higher number of errors and subsequently a lower pass rate than the Facial Similarity Check, this will be the focus of this report



**Document Check Pass Rate**

74%

1474 errors



**Facial Similarity Check Pass Rate**

93%

367 errors

## 4. Document Report Errors summary

- **Despite the high number of errors, very few can be attributed to suspected fraud**

60 attempts were marked as “suspected” within the sub result - indicating low volumes of suspected fraudulent activity. This cannot be improved upon.

- **Image integrity failures account for the highest proportion of Failed Document checks**

Image integrity errors account for **1337 out of a total of 1474** errors across the period (**90%**), this indicates an area of focus for improvement

## 4. Document Image Integrity Errors

Analysing the cases that produced the “sub-result” rejected yielded some interesting results with Image Quality Result and Conclusive Document Quality result being the leading reason for errors.

### Image Integrity & Quality

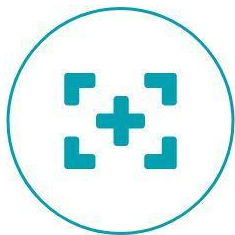
834 Document images where rejected for poor quality (66%), flagging as unidentified for image quality and rejected as sub result - indicating a poor photo of a document.

55 Documents images where rejected for being an unsupported document type, flagging as unidentified for supported document and rejected in sub result

446 “Conclusive Document Quality” errors where produced, of which 430 showed a sub-result of “caution” with no other error flags. In all cases, information was successfully parsed. From reading the API documentation, this could be due to “the name provided doesn't match the one in the document”

I believe this is due to people providing “given names” at sign up rather than full names. For example myself signing up at “Jamie Sims” when my driving license says “James Michael Sims”

## 5. Two Key focus areas for improvements



**Improve image quality during sign up process**

KPI = # of Image\_Integrity\_Errors after improvements have been made



**Improve accuracy of information provided by a user prior to face and document checks**

KPI = # of “caution” sub results with no other report errors



## 5. Recommendations for addressing image quality for document upload

The following recommendations can be made to reduce the number of errors during when submitting a document check

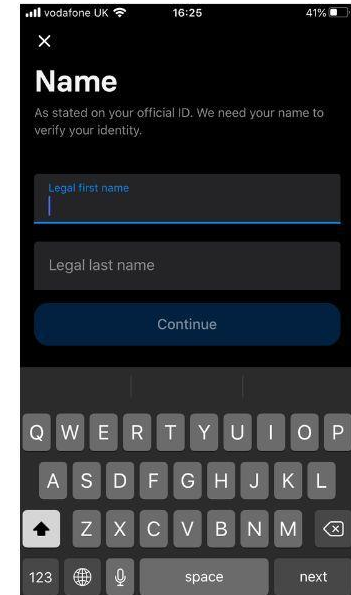


- Clear Visual examples of a “good” and “bad” Documents photo displayed to users before starting the process
- Automatically disabling the flash on a users phone during picture taking to reduce glare
- Providing real time feedback to a user as they are taking photos of their document to ensure the quality is sufficient - addressing picture alignment and other issues
- Allowing a user to review document before submitting and to check it's readable

## 5. Recommendations for addressing data capture at Sign up quality

This can be tested with the null hypothesis - “There will be no significant different in number of errors at sign up if we enforce users to use their 'full name' on sign up”

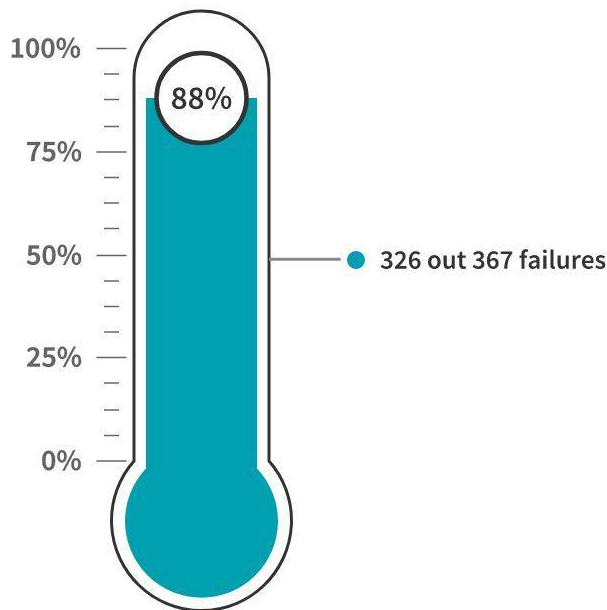
- Change of sign up copy to ask users to input their “full legal name” with a hint reading “as it appears on your passport / id” rather than given name and ensure that all middle names are captured
- Adapt Revolut sign up process to prompt a user to scan their ID Document, using OCR to pre-populate registration information, this will streamline registration and reduce steps required for sign up



The screenshot shows a mobile app interface for a sign-up process. At the top, the status bar shows 'vodafone UK', signal strength, time '16:25', and battery '41%'. The app has a dark theme. A close button (X) is in the top left. The title 'Name' is centered. Below it, a subtitle reads: 'As stated on your official ID. We need your name to verify your identity.' There are two text input fields: 'Legal first name' and 'Legal last name'. The 'Legal first name' field is active, with a blue cursor. Below the fields is a blue 'Continue' button. At the bottom, a standard QWERTY keyboard is visible, with keys for letters, numbers, space, and next.

## 5. Facial Similarity Checks

The most common Facial Image Quality failures where due to poor facial image integrity. Secondary analysis could be done to understand what factors of the photos contribute to poorer image quality, although given the volume of errors this should be considered lower priority



# Face Similarity Check Improvements

- Clearer language on the sign up on how users can take “good quality photos” and the importance
- Show visual examples of good conditions on how to take a good photo e.g. preferred lighting and background conditions
- Show the user the taken photo before they upload so they can ensure it's of quality
- Consider changing to use “Veritas's ”Live video“ check could produce better quality videos for comparison



# Other errors & Insight

A full list of errors on can be found below:

- **97 Visual Authenticity**

47 of these were identified correctly as fraud, 50 of these errors can be due to face detection errors (22)

- **56 Data Validation Errors**

No supplementary error fields were passed to indicate why these errors occurred

- **5 Data Consistency Errors**

2 of these errors overlapped with Visual Authenticity Errors

- **5 Data Comparison Errors**

All other markers were clear, suggesting users inputted a “given name” that didn't match their Document

- **Double failures**

Only 32 users attempted a KYC Check twice in each file

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# Thank you for reading

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<https://github.com/SimsJM/Analysis-Task>





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