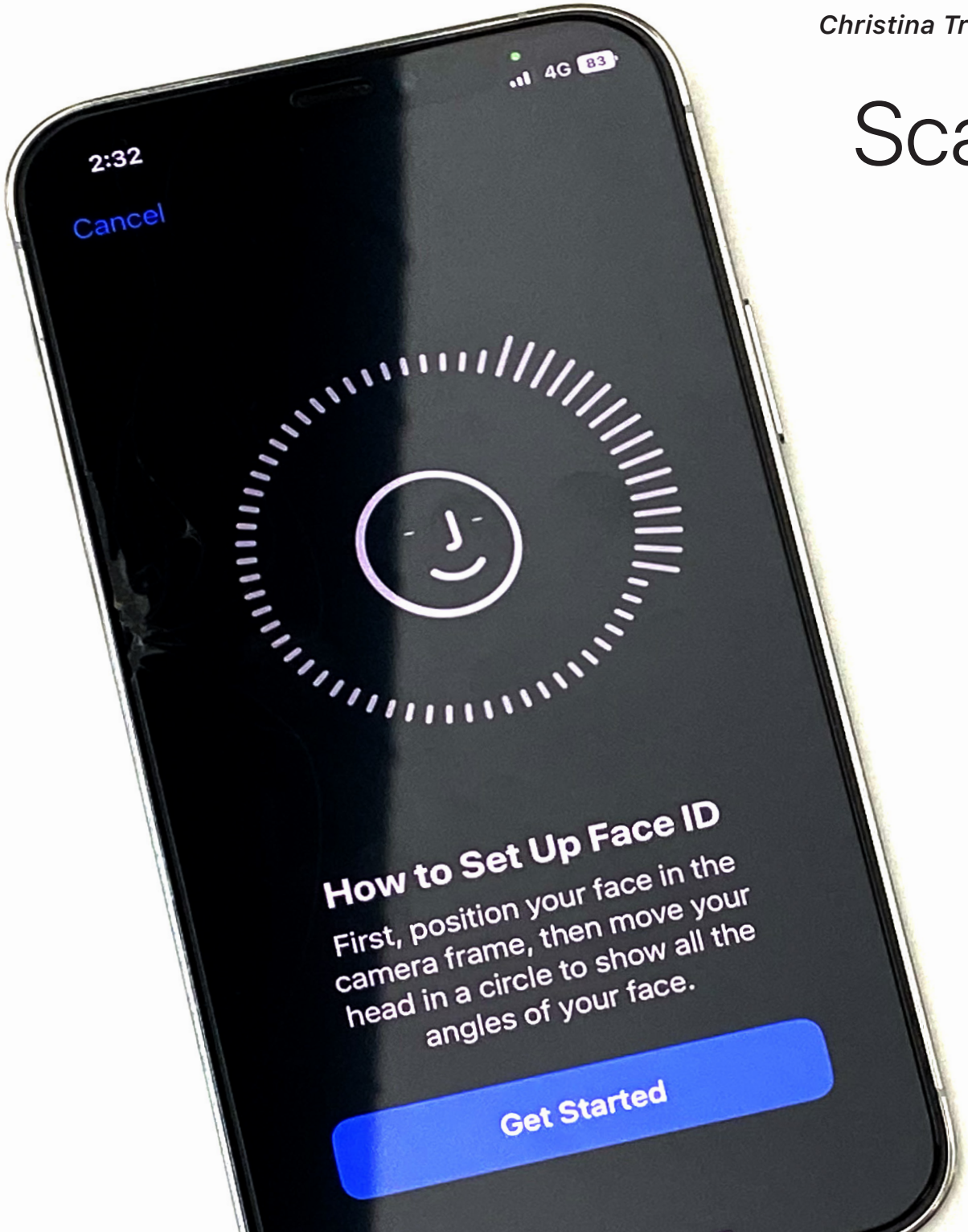
Christina Tran & Olivia Mai

Scan That Mask.

Can your iPhone’s Face ID really scan through that mask quick enough



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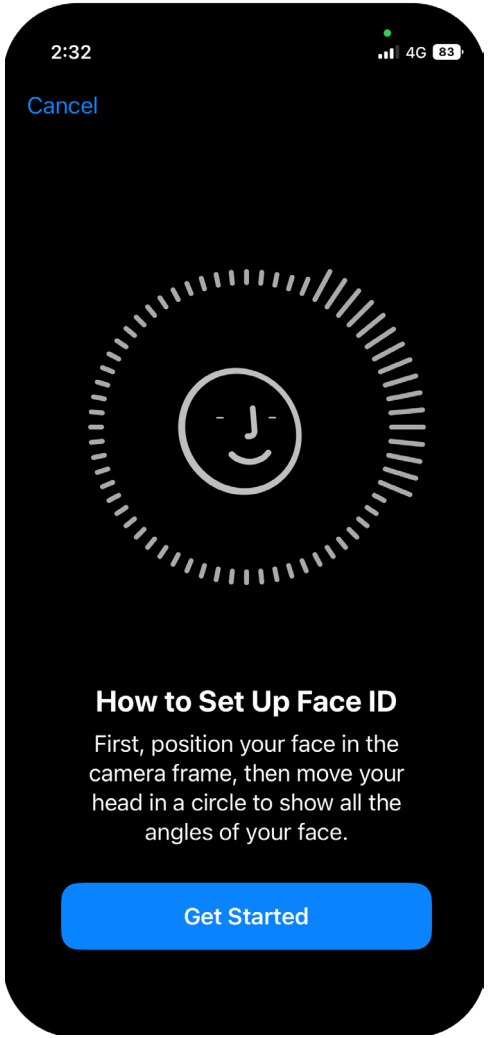
With more than 1 billion Apple users and consumers worldwide, Face ID was readily introduced into their recent era of technology. Face ID is a facial recognition system that was created and developed by Apple Inc, allowing users to simply unlock their phones by placing their faces in front of their cameras.

In 2017, face recognition became officially a part of Apple's products through the concept of Face ID in the new iPhone X. By replacing the previous scanning system the 'touch ID', the new feature was significant in the future of Apple's products. This technology uses a 'TrueDepth camera system" which includes sensors, cameras and a projector at the phone's display lens to create a 3D map of the user's face which allows face ID to recognise and use the information to confirm identity as well as be used in other applications.

Face ID automatically adapts to changes in your appearance, such as wearing makeup or growing facial hair. For face ID to function,

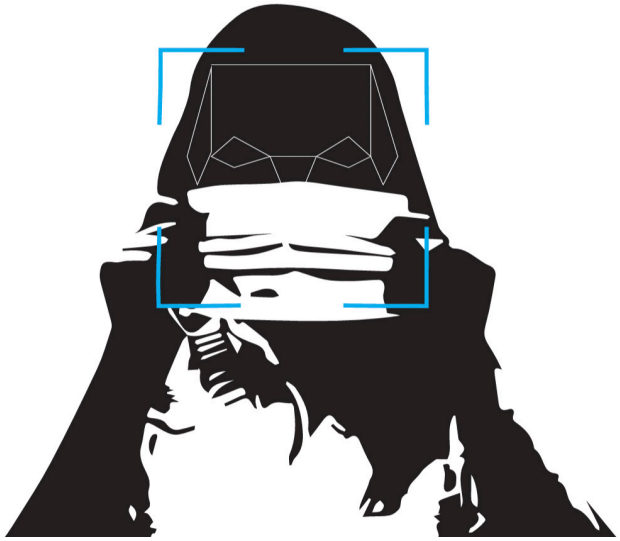


there are multiple hardware factors such as the camera, neutral networks and bionic chips. The iPhone X's 12MP camera remained the same on the surface. However, in terms of software capabilities, it is both larger and faster allowing it to measure depth with the true depth sensor. This plays a significant role in the Face ID feature working. The introduction of Face recognition through face ID opened gates for accessibility across Apple's products as many products are built with a general audience in mind thus, marginalising the consumers. With face ID using a face scanning system those with disabilities are able to access their phone and features with both ease as well as efficiency.

Despite this advancement in technology, there comes challenges to its use for Apple's consumers. In the last few years with the growth of the coronavirus, the increase of people wearing masks was prompt, as a result of this it became difficult to use Apple's Face ID feature to unlock iPhones, in response

to this, Apple readily made unlocking slightly faster by introducing the feature by immediately bringing up the passcode screen when your iPhone detected you're wearing a mask thus allowing users to quickly unlock their phones. Furthermore, Apple's iOS 14.5 was also introduced in response to this issue where it allows our users to unlock the iPhone with face ID while wearing their masks, but in order to do so, you need an Apple watch to be able to use this feature which was obviously a major disadvantage to those who did not have an Apple Watch.

How this new iOS 14.5 feature would work is that you would have to manually enable an option to unlock your iPhone with a less accurate Face ID along with your Apple Watch for authentication. However even with this feature, issues were still relevant, and this advancement was still lacking. This was until iOS 15.4 was introduced on May 16th of this year, which improved most of the issues that iOS 14.5 faced. iOS 15.4 introduced a newly improved version of the Facemask issue which now allows you to use Face ID to unlock your phone while wearing a mask. Apple's Face ID with a Mask works by analysing the unique characteristics around the eyes of the user, even with other face coverings other than a mask such as wearing sunglasses. Ultimately this improvement is the as of the most recent Face ID update of 2022.



Without a doubt, Apple's inclusion of face ID allows ease and efficiency in the user's everyday life but not only this the security was not as large of a concern as when the feature was first announced in 2017 as the probability of another person unlocking your device through Face ID is less than 1 in a million. Thus, making face ID one of Apple's redeeming features.

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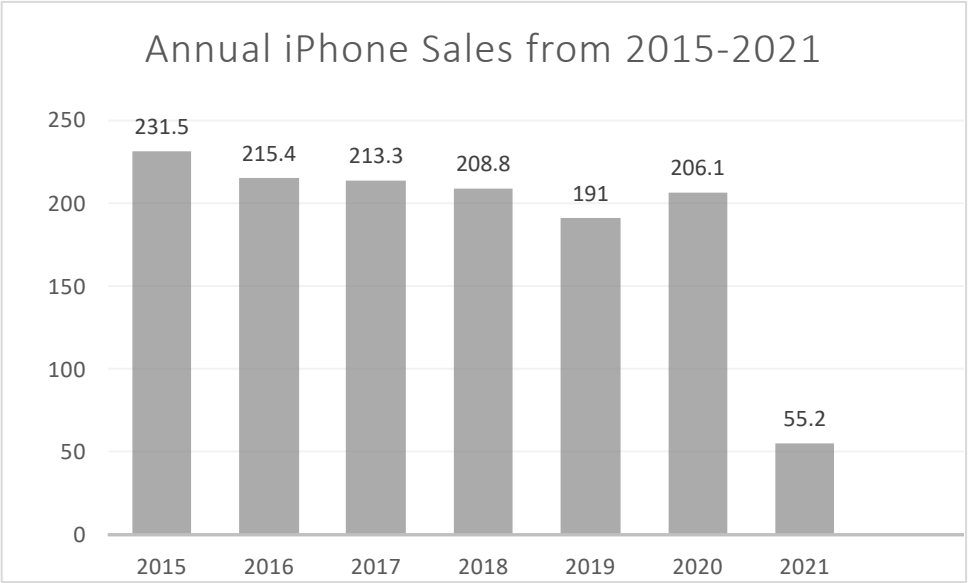
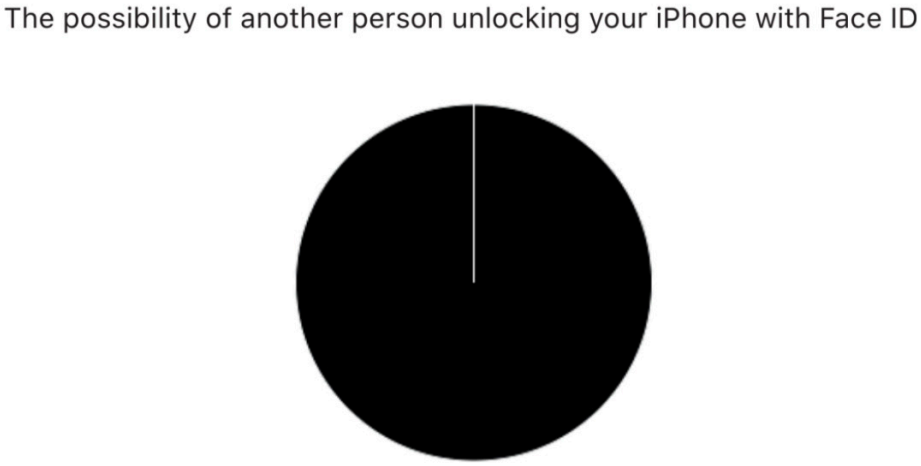
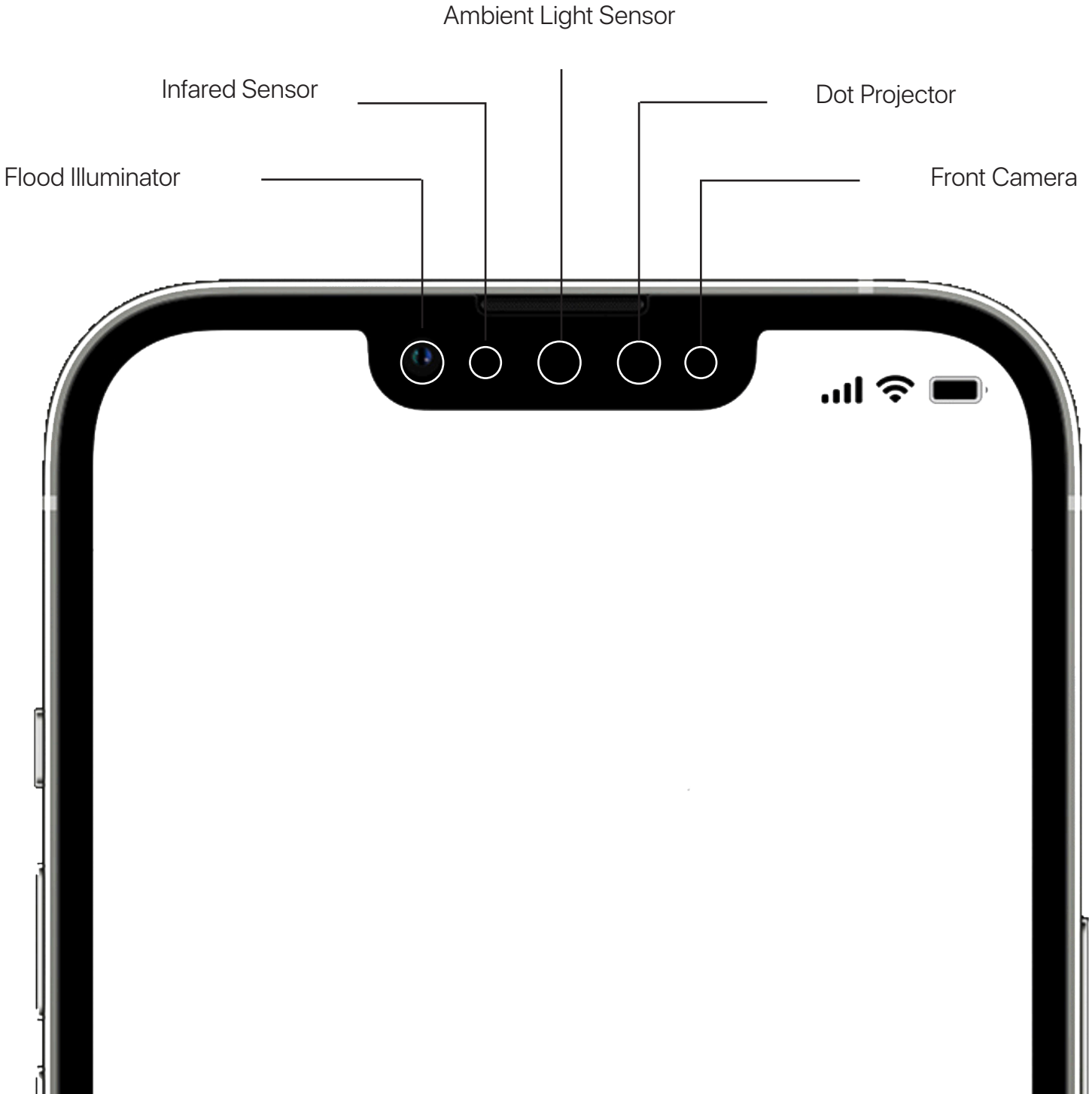
Only you can unlock your iPhone using Face ID
User
Others


Annual iPhone Sales from 2015-2021
250
200
150
100
50
0
231.5
215.4
213.3
208.8
191
206.1
55.2
2015
2016
2017
2018
2019
2020
2021


The possibility of another person unlocking your iPhone with Face ID


Ambient Light Sensor
Infared Sensor
Dot Projector
Flood Illuminator
Front Camera