

**UNITED STATES DISTRICT COURT
DISTRICT OF MASSACHUSETTS**

HENRY DE LA PAZ, individually and on
behalf of all others similarly situated,

Plaintiff,

v.

2U, INC. and EDX, LLC,

Defendants.

Case No.

CLASS ACTION COMPLAINT

JURY TRIAL DEMANDED

Date: April 19, 2024

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Plaintiff Henry De La Paz (“Plaintiff”), individually and on behalf of all other persons similarly situated, by and through his attorneys, make the following allegations pursuant to the investigation of their counsel and based upon information and belief, except as to allegations specifically pertaining to himself and his counsel, which are based on personal knowledge.

NATURE OF THE ACTION

1. This is a class action suit brought against Defendants 2U, Inc. (“2U”) and edX, LLC (“edX”) (collectively, “Defendants”) for violating the Video Privacy Protection Act (“VPPA”).

2. The United States Congress passed the VPPA in 1988, seeking to confer onto consumers the power to “maintain control over personal information divulged and generated in exchange for receiving services from video tape service providers.” S. Rep. No. 100-599, at 8. “The Act reflects the central principle of the Privacy Act of 1974: that information collected for one purpose may not be used for a different purpose without the individual’s consent.” *Id.*

3. The VPPA prohibits “[a] video tape service provider who knowingly discloses, to any person, personally identifiable information concerning any consumer of such provider.” 18 U.S.C. § 2710.

4. Defendants own and operate edX, a mobile application containing videos that “brings online courses from the world’s best universities and industry-leading companies to your mobile device, making it easy for you to learn something new and build job-relevant skills in today’s fastest growing fields” (the “App”).¹

¹ GOOGLE STORE, EDX: COURSES BY HARVARD & MIT, https://play.google.com/store/apps/details?id=org.edx.mobile&hl=en_US&gl=US (last accessed Mar. 19, 2024).

5. EdX was founded as a nonprofit organization by academics affiliated with Harvard University and the Massachusetts Institute of Technology. EdX owned and operated the App and pre-recorded video courses offered on the App exclusively until 2021.

6. In 2021, 2U acquired edX. Through this acquisition, 2U now oversees the operations of edX, including the delivery of pre-recorded videos and online courses on the App.

7. Unbeknownst to Plaintiff and Class Members, Defendants knowingly and intentionally discloses their users' personally identifiable information—including a record of every video viewed by the user—to unrelated third parties. By doing so, Defendants violated the VPPA.

8. Plaintiff brings this action for damages and other legal and equitable remedies resulting from Defendants' violations of the VPPA.

FACTUAL BACKGROUND

I. HISTORY AND OVERVIEW OF THE VPPA

9. The impetus for the VPPA began with President Ronald Reagan's nomination of Judge Robert Bork to the United States Supreme Court. During the confirmation process, a movie rental store disclosed the nominee's rental history to the Washington City Paper which then published that record. Congress responded by passing the VPPA, with an eye toward the digital future. As Senator Patrick Leahy, who introduced the Act, explained:

It is nobody's business what Oliver North or Pratik Bork or Griffin Bell or Pat Leahy watch on television or read or think about when they are home. In an area of interactive television cables, the growth of computer checking and check-out counters, of security systems and telephones, all lodged together in computers, it would be relatively easy at some point to give a profile of a person and tell what they buy in a store, what kind of food they like, what sort of television programs they watch, who are some of the people they telephone. I think that is wrong.

S. Rep. 100-599, at 5-6 (internal ellipses and brackets omitted).

10. In 2012, Congress amended the VPPA, and in so doing, reiterated the Act’s applicability to “so-called ‘on-demand’ cable services and Internet streaming services [that] allow consumers to watch movies or TV shows on televisions, laptop computers, and cell phones.” S. Rep. 112-258, at 2.

11. The VPPA prohibits “[a] video tape service provider who knowingly discloses, to any person, personally identifiable information concerning any consumer of such provider.” 18 U.S.C. § 2710(b)(1). The VPPA defines personally identifiable information (“PII”) as “information which identifies a person as having requested or obtained specific video materials or services from a video service provider.” 18 U.S.C. § 2710(a)(3). A video tape service provider is “any person, engaged in the business, in or affecting interstate or foreign commerce, of rental, sale, or delivery of prerecorded video cassette tapes or similar audio visual materials.” 18 U.S.C. § 2710(a)(4).

II. DEFENDANTS ARE VIDEO TAPE SERVICE PROVIDERS

12. Defendant edX “is a mission-driven online course provider,” specializing in providing educational videos and online classes.² In 2021, Defendant 2U acquired edX and now oversees the operation of the App and delivery of pre-recorded video content to consumers.

13. The App is available for download and use throughout the United States, including in Massachusetts.

² Terms Of Service, EDX, <https://www.edx.org/edx-terms-service> (last accessed Mar. 19, 2024).

14. In particular, the App provides courses from a number of Massachusetts-based universities, including but not limited to Harvard, MIT, Boston University, Babson College, and the Berklee College of Music.³

15. Defendants' App hosts and delivers thousands of videos, featuring them as standalone content and as part of full-length courses and degree programs. The videos are all prerecorded educational programs and lectures, covering a wide variety of topics.

III. DEFENDANTS KNOWINGLY DISCLOSE CONSUMERS' PERSONALLY IDENTIFIABLE INFORMATION TO THIRD PARTIES

A. Testing Reveals That Defendants Illegally Share Consumers' PII And Viewing Information With Third Parties—Braze, Google, And Twilio

16. In March 2024, Plaintiff's counsel retained a private research company to review the App and conduct a dynamic analysis. A "dynamic analysis" records the transmissions that occur from a user's device.

17. The researchers tested what information (if any) was disclosed when a user watches a video on the App. The analysis revealed that Defendants disclose information to third parties sufficient to identify specific Class Members and the specific videos they watched.

18. The analysis first established that Defendants incorporate multiple "application programming interfaces" ("APIs") and "software development kits" ("SDKs") into their App.

19. APIs "enable[] companies to open up their applications' data and functionality to external third-party developers, business partners, and internal departments within their companies."⁴

³ SCHOOLS AND PARTNERS, <https://www.edx.org/schools-partners>.

⁴ Application Programming Interface (API), IBM, <https://www.ibm.com/cloud/learn/api> (Last accessed Mar. 19, 2024).

20. SDKs allow app developers to “build UI elements, access data, and integrate with third-party services.”⁵

21. Defendants integrate into the App the Braze API, an API owned and operated by a company of the same name that describes its API as a “customer engagement platform.”⁶

22. Defendants also integrate into the App the Firebase SDK, an app development platform owned and operated by Google. Google is a company that “gets its money by tracking its users and using the data it collects to sell targeted ads to companies.”⁷ The Firebase SDK furthers that aim as part of the Google Marketing Platform by allowing its clients, like Defendants, to “[e]ngage end users ... using custom notifications,” “[m]onetize an app ... [and i]ncrease revenue by personalizing user experience,” and “[t]est and rollout features ... [to e]nsure stable and delightful features before launch.”⁸

23. Defendants also incorporate into the App the Segment API, an API owned and operated by Twilio. Twilio is “a customer engagement platform used by hundreds of thousands of businesses and more than ten million developers worldwide to build unique, personalized experiences for their customers.”⁹ Twilio powers this platform through the Segment API, which

⁵ What is an SDK?, AWS, <https://aws.amazon.com/what-is/sdk/> (last accessed Mar. 19, 2024).

⁶ About Braze, BRAZE, <https://www.braze.com/company/careers> (last accessed Mar. 19, 2024).



⁷ Matt Krantz, *Ask Matt: Is Google a Tech or Ad Company?*, USA TODAY (July 23, 2013), <https://www.usatoday.com/story/money/columnist/krantz/2013/07/23/google-ad-company-tech/2493109/>;

⁸ Solutions, FIREBASE, <https://firebase.google.com/solutions> (last accessed Apr. 12, 2024).

⁹ What is Twilio? An introduction to the leading customer engagement platform, TWILIO, <https://www.twilio.com/en-us/resource-center/what-is-twilio-an-introduction-to-the-leading-customer-engagement-platform> (last accessed Apr. 12, 2024).

offers “world-class customer data infrastructure, so [developers] can design hyper-personalized, omnichannel campaigns across all channels.”¹⁰

24. The dynamic analysis found that when a user views a video on the App on either an Android or iOS mobile device, Defendants transmit information sufficient to permit an


Summary of Third-Party Exfiltration  			
<i>THIRD PARTY</i>	<i>VIDEO INFO</i>	<i>PERSONAL INFO</i>	<i>OTHER INFO</i>
Braze	Video ID, Video URL, Video title*, Video interactions	Email, Username	User ID, Device ID, IDVF*
Segment	Video ID, Video URL, Video title*, Video interactions	Email, Username	User ID, Device ID
Google Analytics (Firebase)	Video ID, Video URL, Video title*, Video interactions	Email, Username	User ID, AAID (Android only)

**Video title & IDVF was observed being sent in iOS test only*

ordinary person to identify a specific person’s video-viewing behavior to all three third parties:

25. Specifically, when a user views a video the App, Defendants disclose to Braze via the Braze API a user’s: (i) e-mail address; (ii) custom username; (iii) Braze user ID; (iv) the device’s Braze ID; (v) the title of the specific video viewed (on iOS only); (vi) the video ID and video URL for the specific video viewed; and (vii) the fact that the specific video was actually watched or viewed by the user (e.g., “Component Viewed” in the below example).

¹⁰ TWILIO SEGMENT, <https://segment.com/twilio/> (last accessed Mar. 19, 2024).



Third Party: Braze

Braze (formerly Appboy) is a customer engagement platform specializing in multichannel marketing

We observed **Braze** obtaining:

Video Information in the form of:

- Video ID, URL
- Video Title (iOS only)
- Vide interactions

Personal Information in the form of:

- Email
- Custom username

Other Information such as:

- User ID
- Device ID

```

(packet) outbound to sdk.iad-06.braze.com:443
not encrypted at time Wed March 06 2024
(1709734997.251603) uuid
3034b1f9-fd4e-4296-ab18-6dbee2e6cda8
-----
POST /api/v3/data HTTP/2.0
...
{
  "api_key":
    "9422b852-9ad6-4f27-824a-a7f3e7148cf5",
  "app_version": "5.0.5",
  "app_version_code": "5.0.5.0",
  "attributes": [{
    "custom": {
      "anonymousId":
        "C3FC5F8E-98C1-4EB0-8FB5-858F29278B79",
      "userId": "57968373",
      "username": "happyday2123",
      "email": "beegoodkay@gmail.com",
      "push_token":
        "1177a22560e44b9a7240fdeate0bf0b6867577895debbc
        11579f72722fff9af4",
      "user_id": "57968373"
    }
  },
  "device": {
    "carrier": "",
    "ios_idfv":
      "C1BBDFF8-269F-40BE-91ED-414E5A7164EB",
    ...
  },
  "locale": "en-US",
  "model": "iPhone12,1",
  "os_version": "17.3.1",
  "remote_notification_enabled": "true",
  "resolution": "828x1792",
  "time_zone": "America/New_York",
  "device_id":
    "C1BBDFF8-269F-40BE-91ED-414E5A7164EB",
  ...
}

```

```

(packet) outbound to sdk.iad-06.braze.com:443 not
encrypted at time Wed March 06 2024 (1709734997.251603)
uuid 3034b1f9-fd4e-4296-ab18-6dbee2e6cda8
-----
POST /api/v3/data HTTP/2.0
-
{"events":[{"session_id":"95E52451-B8C5-4F15-88D7-860A666
62A1D7","data":{"n":"Unit
Detail","p":{"category":"screen","data":{"context":{"app
_name":"edx.mobileapp.iOS"},"action":"A Crisis in
Discretown"},"device-orientation":"portrait","context":{"
course_id":"course-v1:HarvardX+STAT110x+2T2023","app_na
me":"edx.mobileapp.iOS"},"user_id":"57968373","label":"Uni
t Detail","device_model":"iPhone
11","name":"edx.bi.app.navigation.screen"},"user_id":"5
7968373","name":"ce","time":1709735704.7119999},"sessio
n_id":"95E52451-B8C5-4F15-88D7-860A6662A1D7","data":{"n
":"Component
Viewed","p":{"category":"navigation","data":{"course_id
":"course-v1:HarvardX+STAT110x+2T2023","minifiedBlockID":
"caab7c0b53ee42438d69b772c5f1eb4","block-id":"block-v1:
HarvardX+STAT110x+2T2023+type@video+block@caab7c0b53ee42
438d69b772c5f1eb4"},"device-orientation":"portrait","co
ntext":{"app_name":"edx.mobileapp.iOS"},"user_id":"579683
73","label":"Component Viewed","device_model":"iPhone
11","name":"edx.bi.app.navigation.component.viewed"},"u
ser_id":"57968373","name":"ce","time":1709735704.7249999
},"app_version":"5.0.5","time":1709735714.7339821},"devi
ce_id":"C1BBDFF8-269F-40BE-91ED-414E5A7164EB","api_key":
"9422b852-9ad6-4f27-824a-a7f3e7148cf5","app_version_code
":"5.0.5.0","sdk_version":"4.5.4","sdk_flavor":"segment"
}

```

Transmissions from the edX App to Braze on iOS

26. Further, when a user views a video in the App, Defendants disclose to Google via the Firebase SDK the user's: (i) email address; (ii) custom username; (iii) Firebase ID; (iv) advertising ID ("AAID") (on Android only); (v) the title of the specific video viewed (on iOS only); (vi) the video ID and video URL for the specific video viewed; and (vii) the fact that the specific video was actually watched or viewed by the user (e.g., "Component Viewed" in the below example).

Third Party: Google Analytics



Google Analytics is an app measurement solution, that provides insight on app usage and user engagement.

We observed **Google Analytics** obtaining:

Video Information in the form of:

- Video ID, URL
- Video Title (iOS only)
- Video interactions

Personal Information in the form of:

- Email
- Custom username

Other Information such as:



- User ID
- AAID (Android only)

```
(packet) outbound to app-measurement.com:443 not encrypted at time Wed March 06 2024 (1709735384.051779) uuid
ce831c60-40f4-4432-8861-98e2b43bb1a9
-----
POST /a HTTP/2.0
..
..
item_category..
navigation
1
.._data.d({"block-id":"block-v1:HarvardX+CS50P+Python+type@video+block@35584cee736d4226a528ca04ebbb0f15";"cour
*_sc.#SingleChildContainingViewController
.._o..app
device_model..iPhone11
.._sn..Videos: Course Videos.Component_Viewed.....1.....1...
..device_orientation..portrait
..
item_category..
.._o..app
1
.._data.d({code:mobile;"current_time"="96.29157360799999";"module_id"="block-v1:HarvardX+CS50P+Python+type@vid
3
item_name.&edx.bi.video.screen.fullscreen.toggled
0
..context.d({"app_name"="edx.mobileapp.ios";"component=videoplayer";"course_id"="course-v1:HarvardX+CS50P+Python";
.._pi....._vs.....1.....1.....1....._fi.....1....._fot.....1....._sld.....1....._sno
.....1....._id..57960373.S.....1.._email..beegoodkay@gmail.com.....1.._username.happyday2123.....1.._sno
anonymousId.SC3FC5F8E-98C1-4EBD-8FB5-858F29278B79.....1.._userId..57960373.....1.._lte.....1.._se
.....1({.....10.....18.....1B.iosJ.17.3.1R
iPhone12,1Z,en-us.....r.org.edx.mobile.....5.0.5.....5C9E606C98D5474EAF69702C2A32385..
..#1:90268895829:ios:c040809b49270266.....1..SC1BBDF8-269F-40BE-91ED-414E5A7164EB..
```

Transmissions from the edX App to Google Analytics

27. Finally, when a user views a video in the App, Defendants disclose to Twilio via the Segment API the user's: (i) email address; (ii) custom username; (iii) Segment ID; (iv) device ID; (v) the title of the specific video viewed (on iOS only); (vi) the video ID and video URL for the specific video viewed; and (vii) the fact that the specific video was actually watched or viewed by the user (e.g., "Video Paused" in the below example).

Third Party: Segment



Segment

Segment is a Customer Data Platform (CDP), which means that it provide a service that simplifies collecting and using data from the users of your digital properties (websites, apps, etc).

We observed **Segment** obtaining:

Video Information in the form of:

- Video ID, URL
- Video Title (iOS only)
- Video interactions

Personal Information in the form of:

- Email
- Custom username

Other Information such as:

- User ID, Device ID

```

(packet) outbound to api.segment.io:443 not encrypted at time Wed March 06 2024 (1709735827.181615) uuid
845e37d3-f790-49f5-a940-ef95fd189735
-----
POST /v1/batch HTTP/2.0
-
{"batch":[{"messageId":"315BD002-AA9F-4A39-A6BC-E56145F49A62","anonymousId":"C3FC5F8E-98C1-4EBD-8FB5-858F29278B79","userId":"57960373","event":"Paused Video","context":{"screen":{"width":414,"height":896},"instanceId":"608C7F02-D89E-4A77-8E43-2EB77059DE00","device":{"manufacturer":"Apple","model":"iPhone12,1","id":"C1BBDFF8-269F-408E-91ED-414E5A7164EB","type":"ios","name":"iPhone","token":"117fa22560c44b0a7240fdea1e0bf0b68675778950ebcc11579f2722ff9af4"},"app":{"version":"5.0.5","namespace":"org.edx.mobile","name":"edx","build":"2"},"os":{"name":"iOS","version":"17.3.1"},"locale":"en-US","library":{"name":"analytics-ios","version":"4.1.8"},"timezone":"America/New_York","traits":{"email":"beegoodkay@gmail.com","username":"happydayz123"},"anonymousId":"C3FC5F8E-98C1-4EBD-8FB5-858F29278B79","userId":"57960373"},"network":{"carrier":"","wifi":true,"cellular":false},"properties":{"category":"","data":{"code":"mobile","current_time":122.74891210200001,"module_id":"block-v1:HarvardX+FERM+1T2023+type@video+block0872edf9cbabd4c60a680cd1fe3f9ffd"},"context":{"component":"videoplayback","app_name":"edx.mobileapp.ios","course_id":"course-v1:HarvardX+FERM+1T2023","open_in_browser_url":"https://courses.edx.org/xblock/block-v1:HarvardX+FERM+1T2023+type@video+block0872edf9cbabd4c60a680cd1fe3f9ffd"},"device-orientation":"portrait","user_id":"57960373","label":"","device_model":"iPhone11","name":"edx.video.paused"},"type":"track","timestamp":"2024-03-06T14:31:42.310Z","integrations":{"Appboy":false,"google_analytics":false,"firebase":false}},...

```

Transmissions from the edX App to Twilio

1. Overview Of The Braze API

28. When developers build a mobile application, they typically outsource particular functions, like marketing, advertising, and analytics, to third party providers. Braze, Google, and Twilio are examples of these third parties.

29. As Braze notes on its website, Braze is a “customer engagement platform” that “power[s] customer-centric interactions between consumers and brands in real-time.”¹¹

30. Once integrated into a developer’s mobile application, the Braze API allows an app developer to, among other features, analyze app data in real time, conduct real-time targeted

¹¹ BRAZE, <https://www.braze.com/> (last accessed Apr. 12, 2024).

marketing campaigns,¹² and send personalized push notifications and in-app messages to mobile users.¹³

31. As alleged in greater detail below, Defendants utilize each and every one of these features of the Braze API in their App and sends their consumers' PII to Braze through the Braze API in order to assist with Defendant's marketing, advertising, and analytics efforts.

2. *Overview Of The Google Firebase SDK*

32. The Firebase SDK allows customers to "build and grow apps" by increasing revenue and collecting performance data.¹⁴ "At the heart of Firebase is Google Analytics, an unlimited analytics solution."¹⁵

33. "Analytics integrates across Firebase features and provides [customers like Defendants] with unlimited reporting for up to 500 distinct events¹⁶ that you can define using the Firebase SDK."¹⁷ The analytics reports Google Analytics provides help customers like Defendants "understand clearly how [their] users behave, which enables [them] to make informed decisions regarding app marketing and performance optimizations."¹⁸

¹² Data & Analytics, BRAZE, <https://www.braze.com/product/data-and-analytics> (last accessed Apr. 12, 2024).

¹³ Mobile & Web Push, BRAZE, <https://www.braze.com/product/mobile-web-push>; In-App & In-Browser Messaging, BRAZE, <https://www.braze.com/product/in-app-in-browser-messages> (last accessed Apr. 12, 2024).

¹⁴ Firebase, GOOGLE, <https://firebase.google.com/> (last accessed Jan. 31, 2024).

¹⁵ Google Analytics, FIREBASE, <https://firebase.google.com/docs/analytics> (last accessed Apr. 12, 2024).

¹⁶ An event captures "[w]hat is happening in [an] app, such as user actions, system events, or errors." Get Started With Google Analytics, FIREBASE, <https://firebase.google.com/docs/analytics/get-started?platform=ios> (last accessed Apr. 12, 2024).

¹⁷ Google Analytics, FIREBASE, <https://firebase.google.com/docs/analytics> (last accessed Apr. 12, 2024).

¹⁸ *Id.*

34. Google Analytics “automatically captures a number of events” such as when a “video starts playing,”¹⁹ and captures custom events and user properties chosen by the customer.²⁰

35. All of these automatically collected events and user properties, as well as custom events and user properties, can be seen in the overview report on the Google Analytics SDK’s “Dashboard.”²¹ This report summarizes data important to a customer’s business to help “monitor engagement,” “see how much revenue” is being generated, and “evaluate the success of ... app releases.”²²

36. As alleged in greater detail below, Defendants utilize each and every one of these features of the Firebase SDK in the App and sends their consumers’ PII to Google through the Firebase SDK in order to assist with Defendants’ marketing, advertising, and analytics efforts.

3. *Overview of the Segment API*

37. Twilio is “a customer engagement platform used by hundreds of thousands of businesses and more than ten million developers worldwide to build unique, personalized experiences for their customers.”²³

¹⁹ Analytics Help, FIREBASE, https://support.google.com/analytics/answer/9234069?visit_id=638423312398871494-3486140385&rd=2 (last accessed Apr. 12, 2024).

²⁰ Recommended Events, FIREBASE, <https://support.google.com/analytics/answer/9267735> (last accessed Jan. 31, 2024).

²¹ Firebase Overview Report, FIREBASE, <https://support.google.com/analytics/answer/11014767> (last accessed Jan. 31, 2024).

²² Firebase Overview Report, FIREBASE, <https://support.google.com/analytics/answer/11014767> (last accessed Jan. 31, 2024).

²³ What is Twilio? An introduction to the leading customer engagement platform, TWILIO, <https://www.twilio.com/en-us/resource-center/what-is-twilio-an-introduction-to-the-leading-customer-engagement-platform> (last accessed Apr. 12, 2024).

38. Twilio powers this platform through its Segment API, which offers “world-class customer data infrastructure, so [developers] can design hyper-personalized, omnichannel campaigns across all channels.”²⁴ In particular, once integrated into a developer’s mobile application, the Segment API provides Twilio’s platform with “customer identification and segmentation,”²⁵ and it does this by “collecting and connecting data from other tools and aggregating the data to monitor performance, inform decision-making processes, and create uniquely customized user experiences.”²⁶

39. As alleged in greater detail below, Defendants utilize each and every one of these features of the Segment API in the App and sends their consumers’ PII to Twilio through the Segment API in order to assist with Defendants’ marketing, advertising, and analytics efforts.

4. *Defendants Disclose Class Members’ E-Mail Addresses To Braze, Google, and Twilio*

40. An email address is a unique string of characters that designates an electronic mailbox. As industry leaders,²⁷ trade groups,²⁸ and courts agree,²⁹ an ordinary person can use an

²⁴ TWILIO SEGMENT, <https://segment.com/twilio/> (last accessed Mar. 19, 2024).

²⁵ Ingrid Lunden, *Twilio Confirms It Is Buying Segment For \$3.2b In An All-Stock Deal*, TechCrunch (Oct. 12, 2020), <https://techcrunch.com/2020/10/12/twilio-confirms-it-is-buying-segment-for-3-2b-in-an-all-stock-deal/>.

²⁶ Segment.io Defined, INDICATIVE, <https://www.indicative.com/resource/segment-io/> (last accessed Apr. 12, 2024).

²⁷ Allison Schiff, *Can Email Be The Next Big Online Identifier?*, AD EXCHANGER (Aug. 25, 2020), <https://www.adexchanger.com/data-exchanges/can-email-be-the-next-big-online-identifier/> (quoting Tom Kershaw, CTO of Magnite, who said “[a]n email address is universally considered to be PII, so as such it can never be a valid identifier for online advertising”).

²⁸ NETWORK ADVERTISING INITIATIVE, NAI CODE OF CONDUCT 19 (2019), https://thenai.org/wp-content/uploads/2021/07/nai_code2020.pdf (identifying email as PII).

²⁹ *See, e.g., United States v. Hastie*, 854 F.3d 1298, 1303 (11th Cir. 2017) (“Email addresses fall within the ordinary meaning of information that identifies an individual. They can prove or establish the identity of an individual.”).

email address to uniquely identify another individual. Indeed, there exists multiple services that enable anyone with internet access and a credit card to look up who owns a particular email address.³⁰

41. As the dynamic analysis establishes, when a user watches a video on the App, Defendants disclose users' e-mail addresses to Braze via the Braze API, Google via the Firebase SDK, and Twilio via the Segment API. The following excerpts from the dynamic analysis are demonstrative:

```
(packet) org.edx.mobile outbound to
sdk.iad-06.braze.com:443 (151.101.1.206)
encrypted at time Tue Mar 5 12:28:20.475 2024
(1709641708475) uuid
835169f7-edc3-44cb-a859-23f29268b90f_s5
-----
POST /api/v3/data HTTP/1.1
-
{
  "api_key":
  "1ee3e6c0-e443-485f-98a4-8a1dfcbbd1a60",
  "app_version": "5.0.4",
  "app_version_code": "5000004.0.0.0",
  "attributes": {
    {
      "custom": {
        "username": "cheekymonkey123"
      },
      "email": "moorbethany81@gmail.com",

```

Defendants' transmission to Braze, showing the email address (and username) highlighted in blue.

```
(packet) outbound to api.segment.io:443 not encrypted at time Wed March 06 2024 (1709735027.181615) uuid
845e37d3-f790-49f5-a940-ef95fb189735
-----
POST /v1/batch HTTP/2.0
-
{"batch":[{"messageId":"315BDC02-AA9F-4A39-A6BC-E56145F49A62","anonymousId":"C3FC5F8E-90C1-4EBD-8FB5-850F29278B
79","userId":"57960373","event":"Paused Video","context":{"screen":{"width":414,"height":896},
"instanceId":"608C7F02-D89E-4A77-8EA3-2EB770590E00","device":{"manufacturer":"Apple","model":"iPhone12,1","id":
"C1BDDFFB-269F-48BE-91ED-414E5A7164EB","type":"ios","name":"iPhone","token":"117fa22560c44b0a7240fdea1e0bf0b686
7577095debcc11579f72722ff9af4"},"app":{"version":"5.0.5","namespace":"org.edx.mobile","name":"edx","build":"2"
},"os":{"name":"iOS","version":"17.3.1"},"locale":"en-US","library":{"name":"analytics-ios","version":"4.1.8"},
"timezone":"America/New_York","traits":{"email":"beegoodkay@gmail.com","username":"happydysz123","anonymousId"
```

Defendants' transmission to Segment/Twilio, showing the email address (and username) highlighted in blue.

³⁰ See, e.g., www.beenverified.com.


```
(packet) com.google.android.gms outbound to
app-measurement.com:443 (2687:f8b8:4886:88b::208e)
encrypted at time Tue Mar 5 12:38:09.678 2824
(1789641889578) uuid
7b3151ae-8b83-425f-88c1-d3c6bbbc3db5_s5
-----
POST /a HTTP/1.1
-
Create_Account_Clicked....1B.androidJ.12R
AOSP on
sargoZ.en-us'.....f.orq.edx.mobile...5.0.4.....
.....5794da6d2-5cb6-473e-8788-39bf5bb188bb.....
63b86388d553cd92838e2ba162473f41.....V.....'1:98
2688895829:android:c84889bb49278266.....1.....<fid
-> eGQ1qJhRqelPji-mpzrJc>.....
..f...G1--...google_signals...19911...

..et... ..vs.....1.....1.....1...fot
.....1.....1...fi.....1...sno
.....1...sid.....1...lte
.....1...se.....1...id..
57941465.....1
anonymousId.S8aca8385-72a2-44bf-92f7-f8d31974cf4b...
.....1.userId..57941465.....1.email..moorbethany8
1@gmail.com.....1.username..cheekymonkey123.....
```

Defendants' transmission to Firebase, showing the email address (and username) highlighted in blue.

5. *Defendants Disclose Class Members' Advertising IDs To Google*

42. An AAID is a unique string of numbers which attaches to a device. As the name implies, an AAID is sent to advertisers and other third parties so they can track user activity across multiple mobile applications.³¹ So, for example, if a third party collects AAIDs from two separate mobile applications, it can track, cross-correlate, and aggregate a user's activity on both apps.

43. Although technically resettable, an AAID is a persistent identifier because virtually no one knows about AAIDs and, correspondingly, virtually no one resets that identifier. BYRON TAU, MEANS OF CONTROL 175 (2024) (“[M]ost people had no idea about the ‘Limit Ad Tracking’ menu on their iPhones or the AAID that Google had given even Android devices. Many still don’t.”).

44. The fact that the use and disclosure of AAIDs is so ubiquitous evinces an understanding on the part of Defendants, Google, and others in the field that they are almost

³¹ See Advertising ID, GOOGLE, <https://support.google.com/googleplay/android-developer/answer/6048248>.

never manually reset by users (or else an AAID would be of no use to advertisers). *See also Louth v. NFL Enterprises LLC*, 2022 WL 4130866, at *3 (D.R.I. Sept. 12, 2022) (“While AAID are resettable by users, the plaintiff plausibly alleges that AAID is a persistent identifier because virtually no one knows about AAIDs and, correspondingly, virtually no one resets their AAID.”) (cleaned up).

45. Using publicly available resources, an AAID can track a user’s movements, habits, and activity on mobile applications.³² Put together, the AAID serves as “the passport for aggregating all of the data about a user in one place.”³³

46. Because an AAID creates a record of user activity, this data can create inferences about an individual, like a person’s political or religious affiliations, sexuality, or general reading and viewing preferences. These inferences, combined with publicly available tools, make AAIDs an identifier that sufficiently permits an ordinary person to identify a specific individual.

47. By disclosing users’ AAIDs to third parties, Defendants disclose information that an ordinary person could use to identify users.

6. *Defendants Disclose Class Members’ User IDs to Braze, Google and Twilio*

48. A user ID is a unique string of numbers which third parties assign to users upon accessing a particular mobile application, allowing developers, like Defendants, to “[t]rack [their] users across devices and platforms, improving the quality of [their] behavioral and

³² Thomas Tamblyn, *You Can Effectively Track Anyone, Anywhere Just By The Adverts They Receive*, HUFFPOST (Oct. 19, 2017), https://www.huffingtonpost.co.uk/entry/using-just-1000-worth-of-mobile-adverts-you-can-effectively-track-anyone_uk_59e87ccbe4b0d0e4fe6d6be5.

³³ Willie Boag, *Trend Report: Apps Oversharing Your Advertising ID*, IDAC, <https://digitalwatchdog.org/trend-report-apps-oversharing-your-advertising-id/> (last accessed Apr. 12, 2024).

demographic data.”³⁴ A user ID can also “include names, email addresses, timestamps, or incrementors.”³⁵

49. By disclosing user IDs to Braze, Google, and Twilio Defendants disclose information that is reasonably and foreseeably likely to identify specific Class Members.

7. *Defendants Disclose Information Identifying Which Specific Videos Were Watched By Which Specific Class Members To Braze, Google, And Twilio*

50. Defendants disclose the full name of the videos viewed by the user on the iOS version of the App to Braze, Google, and Twilio.

51. For example, the dynamic analysis was conducted while a video called “A Crisis in Discretown” was played on a device running the iOS application. As demonstrated below, this title is a video provided by edX and the title of that video was disclosed to Braze (and Google and Twilio):

```
(packet) outbound to sdk.iad-06.braze.com:443 not
encrypted at time Wed March 06 2024 (1709734997.251603)
uuid 3034b1f9-fd4e-4296-ab18-6dbee26ecda8
-----
POST /api/v3/data HTTP/2.0
--
{"events":[{"session_id":"95E52451-B0C5-4F15-88D7-860A66
62A1D7","data":{"n":"Unit
Detail","p":{"category":"screen","data":{"context":{"app
_name":"edx.mobileapp.iOS"},"action":"A Crisis in
Discretown"},"device-orientation":"portrait","context":{
```



³⁴ Setting User IDs for Android and FireOS, BRAZE, https://www.braze.com/docs/developer_guide/platform_integration_guides/android/analytics/setting_user_ids/ (last accessed Mar. 19, 2024).

³⁵ *Id.*

52. This network traffic is transmitted when, and only when, a user actually watches a video, instead of when a user only visits a webpage that the video is on. This is evidenced by the fact that, when the data is transmitted to Braze, Google, and Twilio, the user’s interactions with the video (e.g., video watched, video paused) are also transmitted:

```

Detail", "p": {"category": "screen", "data": {"context": {"app
_name": "edx.mobileapp.iOS"}, "action": "A Crisis in
Discretown"}, "device-orientation": "portrait", "context": {
"course_id": "course-v1:HarvardX+STAT110x+2T2023", "app_na
me": "edx.mobileapp.iOS"}, "user_id": 57960373, "label": "Uni
t Detail", "device_model": "iPhone
11", "name": "edx.bi.app.navigation.screen"}, "user_id": "5
7960373", "name": "ce", "time": 1709735704.7119999}, {"sessio
n_id": "95E52451-B0C5-4F15-88D7-860A6662A1D7", "data": {"n
": "Component
Viewed", "p": {"category": "navigation", "data": {"course-id"
: "course-v1:HarvardX+STAT110x+2T2023", "minifiedBlockID":

```

53. Defendants also disclose to Braze via the Braze SDK, to Google via the Firebase SDK, and Twilio via the Segment API video Uniform Resource Locator (“URL”) for the specific video watched by the user. A video URL leads to the exact online location of the pre-recorded video. This identifier allows even an ordinary person to identify what video a user is watching.

```

rse-v1:HarvardX+STAT110x+2T2023", "open_in_browser_url": "https://courses.edx.org/xblock/block-v1:HarvardX+STAT11
0x+2T2023+type@video+block@c4ab7c0b53ee42438d69bd772c5f1eb4", "component": "videoplayer", "app_name": "edx.mobileap

```

The portion highlighted in yellow is the URL address for the video.

54. Defendants also disclose to Braze the video’s subject matter. Specifically, the above example indicates that Defendants disclose to Braze the edX online course the video is part of, in this case, “Harvard Statistics 110.”

55. By disclosing the video’s subject matter, Defendants also disclose information that would permit an ordinary person to identify the video materials or services that a user has requested or obtained. See 18 U.S.C. § 2710(b)(2)(D)(ii) (establishing by implication that a video’s “title, description, or subject matter” sufficiently identifies “specific video materials or services”) (emphasis added).

56. In summary, Defendants disclose information to third parties, like Braze, Google, and Twilio, that would make it reasonably and foreseeably likely that Braze, Google, and Twilio could identify which specific user requested or obtained which specific video. Indeed, the information Defendants disclose is so identifying that even an ordinary person could identify which specific user requested or obtained which specific video. Accordingly, Defendants disclose personally identifiable information to third parties.

B. Defendants Disclose Personally Identifiable Information To Third Parties For The Purpose Of Marketing, Advertising, And Analytics

57. Defendants disclose personally identifiable information to Braze, Google, and Twilio so they can help Defendants with marketing, advertising, and analytics.

58. As alleged above, the Braze API, Firebase SDK, and Segment API are designed to analyze App data and marketing campaigns, conduct targeted advertising, and ultimately boost Defendants' revenue from their video-based marketing and advertising on the App. *See, e.g., Saunders v. Hearst Television, Inc.*, --- F. Supp. 3d ---, 2024 WL 126186, at *4 (D. Mass. Jan. 11, 2024) (disclosures to Braze and Google for “marketing, advertising, and analytics – do not fall within the [ordinary course of business] exception[.]”) (cleaned up); *Rancourt v. Meredith Corp.*, 2024 WL 381344, at *17 (D. Mass. Feb. 1, 2024) (same as to disclosures to Twilio for “targeted advertising ... which is intended to drive revenue”).

1. Defendants Disclose Personally Identifiable Information To Braze For The Purpose Of Marketing, Advertising, And Analytics

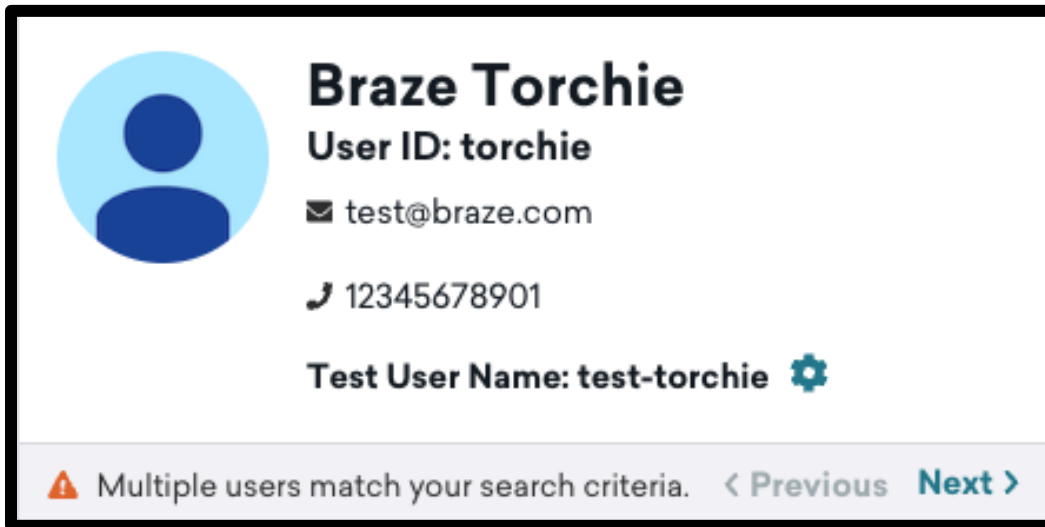
59. Braze describes itself as a “customer engagement platform” that prides itself on “[p]ower[ing] customer-centric interactions between consumers and brands in real-time.”³⁶

³⁶ BRAZE, <https://www.braze.com/>

60. Braze helps app developers like Defendants market, advertise, and analyze app data and analyze real-time user data in order to build precise audiences that can “[i]dentify, target and engage customers based on their likelihood to purchase or perform any other high value action.”³⁷

61. The data Braze collects is not just from one source. On the contrary, app developers can integrate customer data from a variety of sources into Braze. Using this data, app developers can then utilize Braze’s analytics to obtain a “unified view” of their customers in order to “act on real-time and historical preferences [and] behaviors” to target them more effectively.

62. Braze conglomerates all of this data into user profiles, which it associates with identifiers like a Braze user ID and/or e-mail address.³⁸



³⁷ Data & Analytics, BRAZE, <https://www.braze.com/product/data-and-analytics> (last accessed Mar. 19, 2024).

³⁸ User Profiles, BRAZE, https://www.braze.com/docs/user_guide/engagement_tools/segments/user_profiles/#access-profiles (last accessed Apr. 12, 2024).

63. As Braze collects more data however, the user profiles become even more detailed. These detailed user profiles could include data related to a user's location, gender, age group, operating system, actions taken on a website, and even if a user has a credit card or not.³⁹

The screenshot displays a Braze user profile dashboard with the following sections:

- Profile:**
 - Gender: Unknown
 - Age Group: 35-44
 - Country: US
 - City: New York
 - Language: Czech ("cs")
 - Most Recent Device Locale: en_US
 - Time Zone: America/New_York
 - Birthday: --
- Sessions Overview:**
 - Sessions: 14
 - Last Used: Jul 20, 2021 at 09:36
 - First Used: Nov 4, 2019 at 12:11
- Custom Attributes:**
 - # of 'No' clicks: 1
 - arrayAttribute: pet
 - arrayAttributePets: cat and dog
 - Balance: 100
 - Credit Card Holder: true
 - Customer Loyalty Program: true
 - dateAttribute: 2021-05-04 21:13:52
 - doubleAttribute: 3.1
 - Favorite Color: orange
- Recent Devices:**
 - Number of Devices: 3
 - Android
 - App Version: release-15.0.0 (567.0.0.0)
 - Device: Pixel 5
 - Device OS: Android (Android 10)
- Custom Events:**

Name	Count	Last Time
Abandoned Cart	1	Nov 10, 2022 at 12:16
Rated Items	4	Nov 4, 2022 at 08:30
Favorited Items	3	Dec 20, 2021 at 10:58
Made a Search	1	Jul 20, 2021 at 09:33
event:test:raahay	23	Jul 7, 2021 at 07:30
- Purchases:**
 - Overview:
 - Lifetime Revenue: \$3,342.40
 - Last Purchase: Sep 1, 2022 at 00:44
 - Total Number of Purchases: 282
 - Table:

Name	Count	Last Time
Coupon Code	1	Nov 4, 2019 at 12:11
Gift Certificate	5	Mar 15, 2021 at 10:22
Pet Food Purchase	6	Mar 11, 2021 at 10:15
Special Deals Purchase	264	Mar 11, 2021 at 10:15

64. Notably, Braze does not collect all of this data by default. Instead, its default settings only allow Braze to collect data such as time zone and browser types.⁴⁰ Rather, app developers like Defendants must *specifically enable or configure* the Braze API to collect additional data such as e-mail addresses and geolocation.⁴¹

65. Defendants use each and every one of the above-mentioned features of the Braze API in Defendants' integration of the Braze API into Defendants' App. Thus, Defendants utilize the Braze API to analyze user data, create and analyze the performance of marketing campaigns,

³⁹ *See id.*

⁴⁰ SDK Data Collection, BRAZE, https://www.braze.com/docs/user_guide/data_and_analytics/user_data_collection/sdk_data_collection/?redirected=true#personalized-integration (last accessed Mar. 19, 2024).

⁴¹ *Id.* ("Personalized Integration; integrators have the flexibility to collect data in addition to Automatically Collected Data.").

and target specific users or specific groups of users for advertisements. All of this helps Defendants further monetize the Apps and maximize revenue by collecting and disclosing as much PII as possible to Braze through the Braze API.

2. *Defendants Disclose Personally Identifiable Information To Google For The Purpose Of Marketing, Advertising, And Analytics*

66. As alleged above, although PII is still transferred from the App to the Firebase SDK, Firebase's back-end features have been integrated into the Google Marketing Platform. Specifically, the Firebase SDK can be combined with a company's Google Ads suite, allowing companies "access to powerful tools that help you see how your Ads investment drives app installs and in-app actions. With Firebase and Google Ads, you can export audience lists to Ads and import events from Analytics into Ads."⁴²

67. Predominately, these features allow Defendants to analyze App data, measure the performance of marketing campaigns, and control which advertisements are shown to which users.

68. Google Ads provides such features as letting app developers "[a]ccess all of your audience insights in a single tool, so you reach the right people with your message," "[a]pply machine learning to automate steps like [ad] bidding and optimization, helping you respond to customers' needs faster," and know "how your money is being spent and know exactly where your ads are running."⁴³

⁴² Google Ads, FIREBASE, <https://firebase.google.com/docs/ads> (last accessed Mar. 19, 2024).

⁴³ Overview, DISPLAY & VIDEO 360, <https://marketingplatform.google.com/about/display-video-360/> (last accessed Mar. 19, 2024).

69. Customers can “create audiences in Firebase using any combination of events and user properties, and then use those audiences to run targeted ad campaigns.”⁴⁴ These audiences can be combined with audiences gathered from other sources in the Google advertising network, like DoubleClick or YouTube, to target ads more effectively.

70. Among its more prominent features, Firebase allows companies like Defendants to “define custom audiences in the Firebase console based on device data, custom events, or user properties” and “create mobile app marketing lists based on Analytics audiences,” which Defendants can then target with advertisements specific to those users or “increase awareness” of their App generally.⁴⁵

71. Google Ads also automates the real-time bidding process with “machine-learning algorithms.”⁴⁶ Real-time bidding is the process by which advertisers compete to display advertisements on a particular mobile application or website; if the advertiser’s bid is accepted, that advertisement is displayed to a user over others. Accordingly, companies like Defendants can use Google Ads to automate this process and use machine learning to determine what is the best advertisement to display to a particular user.

72. Google allows Defendants to manage their search campaigns, which enables Defendants “to place ads across Google’s vast network of search results. You can show ads to people actively searching online for your products and services.”⁴⁷

⁴⁴ Google Ads, FIREBASE, <https://firebase.google.com/docs/ads> (last accessed Mar. 19, 2024).

⁴⁵ Features, DISPLAY & VIDEO 360, <https://marketingplatform.google.com/about/display-video-360/> (last accessed Mar. 19, 2024).

⁴⁶ *Id.*

⁴⁷ Create a Search Campaign, GOOGLE SUPPORT, <https://support.google.com/google-ads/answer/9510373?hl=en>.

73. To that end, Google Ads uses Smart Bidding. “Smart Bidding trains its artificial intelligence models on hundreds of billions of search queries and combinations of signals, then uses these signals at auction-time to set bids to hit advertiser goals.”⁴⁸

74. Among its more prominent features, Google allows companies like Defendants, to “[m]ake your search campaigns smarter and more responsive with real-time data, analysis and bid adjustments,” “[m]easure conversions,” and to “[t]ailor your audience targeting and activation” for advertisements. Like Display & Video 360, Search Ads 360 also integrates with data from other APIs.⁴⁹

75. Defendants use each and every one of the above-mentioned features of the Firebase SDK and Google Marketing Platform in Defendants’ integration of the Firebase SDK into the App. Thus, Defendants utilize the Firebase SDK and Google Marketing Platform to analyze user data, create and analyze the performance of marketing campaigns, and target specific users or specific groups of users for advertisements. All of this helps Defendants further monetize the App and maximize revenue by collecting and disclosing as much PII as possible to Google via the Firebase SDK.

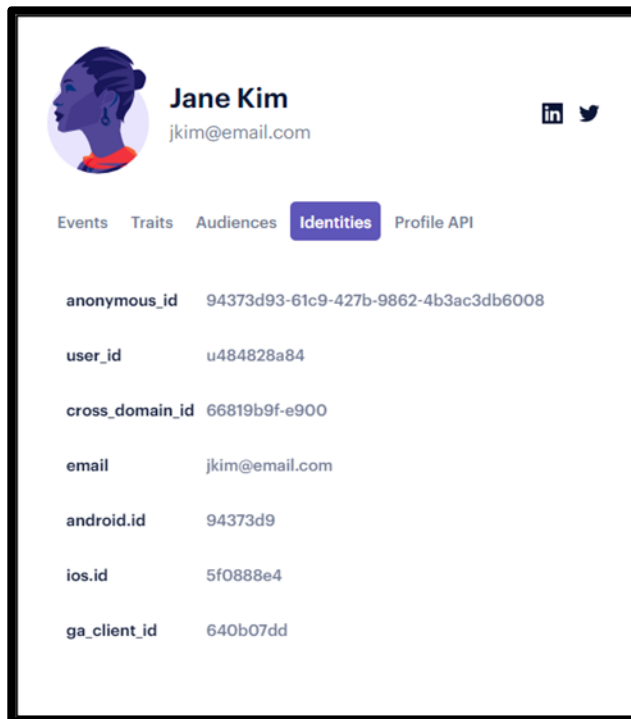
3. *Defendants Disclose Personally Identifiable Information To Twilio For The Purpose Of Marketing, Advertising, And Analytics*

76. Twilio entices developers to integrate the Segment API by underscoring its signature feature: “Engage.” Formerly known as Personas, Engage “is a powerful

⁴⁸ Finding Success With Smart Bidding, GOOGLE, https://support.google.com/googleads/answer/6167140?hl=en&ref_topic=10287125,3181080,3126923,&sjid=3757994061842207703-NC&visit_id=638462957892385814-1954865693&rd=1 (last accessed Mar. 19, 2024).

⁴⁹ Features, SEARCH ADS 360, <https://marketingplatform.google.com/about/search-ads-360/features> (last accessed Mar. 19, 2024).

personalization platform that helps you create unified customer profiles.”⁵⁰ Twilio creates these “unified customer profiles” by “tak[ing] event data from across devices and channels and intelligently merg[ing] it into complete user- or account-level profiles.”⁵¹ Twilio then illustrates what developers, like Defendant, can expect:



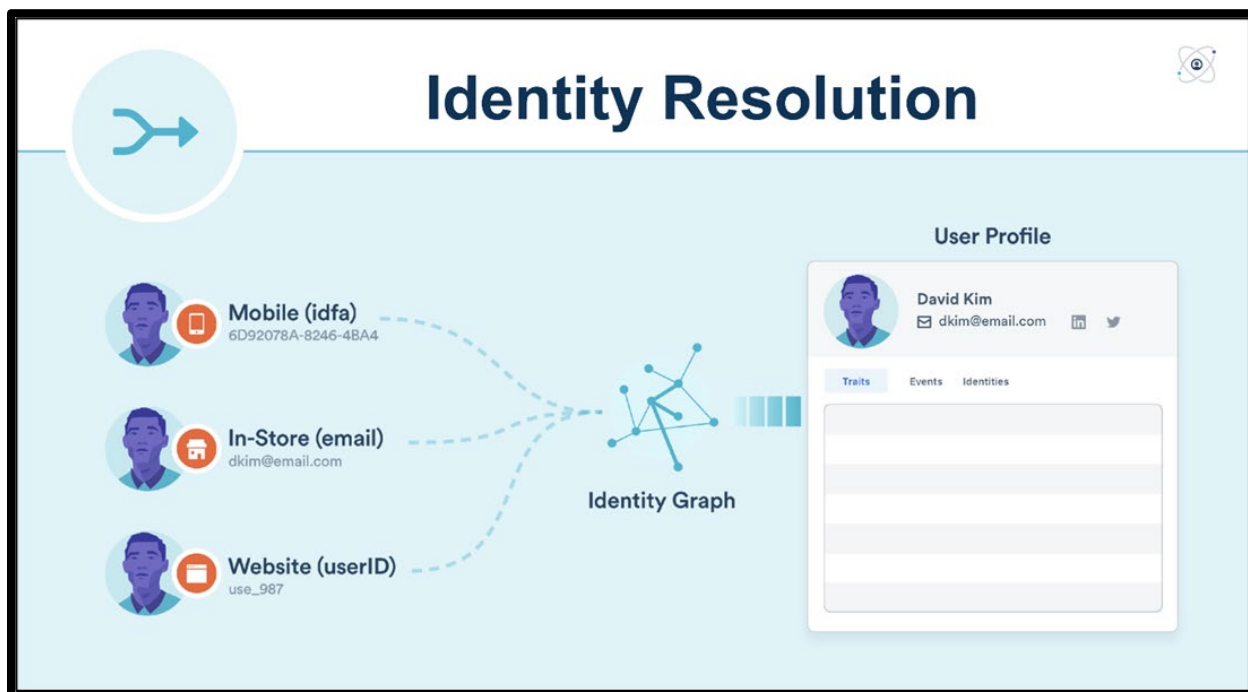
77. Twilio builds these personas through “Segment Identity Resolution.” This process “merges the complete history of each customer into a single profile, no matter where they interact with your business.”⁵² The Segment Identity Resolution supports, among other identifiers, “cookie IDs, device IDs, emails, and custom external IDs,” helping Twilio capture “a user’s interaction across web, mobile, server and third party partner touch-points in real-

⁵⁰ Documentation, SEGMENT, <https://segment.com/docs/engage/> (last accessed Apr. 12, 2024).

⁵¹ *Id.*

⁵² Personas Identity Resolution Overview, SEGMENT, <https://segment.com/docs/personas/identity-resolution/#:~:text=The%20Segment%20Identity%20Graph%20merges,they%20interact%20with%20your%20business> (last accessed Mar. 19, 2024).

time[.]”⁵³ The Segment Identity Resolution then combines these “multiple external IDs,” into “one persistent ID,”⁵⁴ culminating into its profile of each user:



78. With Identity Resolution, Twilio associates a users’ AAID with a corresponding Persona Profile on Twilio’s platform. Because Twilio assembles information from other sources into the Persona Profile, AAID alone allows Twilio to identify a particular person.

79. Twilio leverages these profiles to assist developers, like Defendants, in enhancing their marketing, advertising, and analytics efforts.

80. Defendants disclose users’ PII to Twilio through the Segment API so Twilio can better target its marketing campaigns. Defendants do this through Twilio’s “Audience” feature, which “group[s] users or accounts based on event behavior and traits that Segment tracks.”⁵⁵ In

⁵³ *Id.*

⁵⁴ *Id.*

⁵⁵ Engage Audience Overview, SEGMENT, <https://segment.com/docs/engage/audiences/> (last accessed Mar. 19, 2024).

other words, Audiences allows for targeted marketing of advertisements at Engage profiles that fit specific parameters. As explained below, Defendant builds these marketing campaigns through Twilio’s analytics services.

81. Defendants also disclose users’ PII to Twilio, through the Segment API, so they can better target advertisements. After Defendants disclose users’ PII, Twilio compiles and transmits that information to other third parties that Defendants utilize for targeted advertising, such as Meta/Facebook, Google, and Salesforce.⁵⁶ Twilio labels these companies “Segment Destinations,” which are tools that businesses use for personalization and marketing.⁵⁷

82. In this role, Twilio acts as a facilitator, compiling PII so developers can “personalize messages across channels, optimize ad spend, and improve targeting.”⁵⁸ When Twilio transmits PII to Facebook, for example, it sends “an expanded list of identifiers or traits to Facebook, so that Facebook can try to use these additional datapoints to match to their user profiles.”⁵⁹ The same goes for Google, with Twilio helping developers “run advertising campaigns without having to manually update the list of users to target in Adwords campaigns.”⁶⁰ Defendants utilize Twilio to amplify their advertising campaigns.

83. Defendants then build marketing campaigns based on this analysis. For edX, Defendants select traits like “e-mails received” or “videos viewed” and send distinct marketing e-mails and advertisements to users who have those traits.

⁵⁶ Using Engage Data, SEGMENT, <https://segment.com/docs/engage/using-engage-data/> (last accessed Apr. 12, 2024) (these third parties include Facebook, Google, and Salesforce).

⁵⁷ *Id.*

⁵⁸ *Id.*

⁵⁹ Personas Facebook Custom Audiences Destination, SEGMENT, <https://segment.com/docs/connections/destinations/catalog/personas-facebook-custom-audiences/>.

⁶⁰ *Id.*

84. Twilio describes the above process as “building an Audience,” meaning it “group[s] users or accounts based on event behavior and traits that Segment tracks.”⁶¹ As an example, Twilio lets developers “create[e] an ‘inactive accounts’ audience that lists paid accounts with no logins in 60 days.”⁶² After, “developers can push the audience to your marketing and analytics tools.”⁶³

85. In short, Defendants utilize the Segment API to analyze user data, launch marketing campaigns, and target specific users or specific groups of users for advertisements. All of this, especially in conjunction with Segment’s marketing and advertising services, helps Defendants monetize the App and maximize revenue by collecting and disclosing as much PII as possible to Twilio via the Segment API.

C. Defendants Knowingly Disclose Consumers’ PII To Braze Google, and Twilio

86. Based on the above, it is abundantly clear that Defendants *intentionally* and *knowingly* disclose to Braze, Google, and Twilio, through the Braze API, Firebase SDK, and Segment API, respectively, App users’ personally identifiable information.

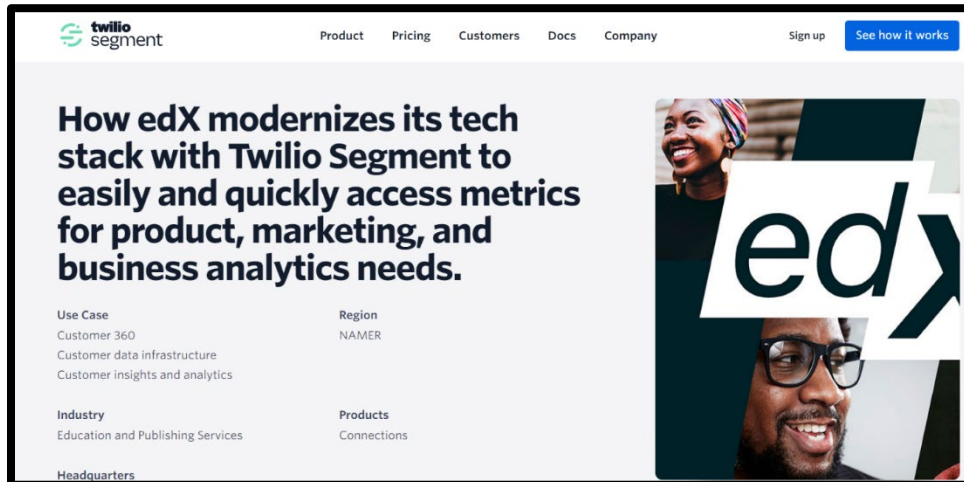
87. Defendants dispel any doubt about their intentional and knowing disclosure of PII to Twilio by appearing in a case study featuring their use of the Segment API.⁶⁴

⁶¹ Engage Audiences Overview, SEGMENT, <https://segment.com/docs/engage/audiences/> (last accessed Apr. 12, 2024).

⁶² Documentation, SEGMENT, <https://segment.com/docs/engage/> (last accessed Apr. 15, 2024).

⁶³ *Id.*

⁶⁴ How Edx Modernizes Its Tech Stack With Twilio Segment To Easily And Quickly Access Metrics For Product, Marketing, And Business Analytics Needs, SEGMENT CUSTOMERS, <https://segment.com/customers/edx/> (last accessed Mar. 19, 2024).



88. The case study notes: “[t]o overcome analytics integration and maintenance challenges, the edX team implemented Twilio Segment. Twilio Segment provided edX with a unified platform to easily integrate and turn on multiple third-party analytics and marketing tools.”⁶⁵ Specifically, “edX wanted to capture important events, like when students viewed its course directory or registered for a class.”⁶⁶

89. Further, “Twilio Segment saves [edX] engineers time traditionally spent instrumenting tools, and gives business analysts a complete set of customer data to slice and dice as they please. Whenever edX has a question about how to implement tracking or which tools to try, Twilio Segment’s success team is there to help.”⁶⁷ And “[b]ecause edX sends its data through Twilio Segment’s single hub, each of its tools receives consistent data that is easier to analyze.”⁶⁸

⁶⁵ *Id.*

⁶⁶ *Id.*

⁶⁷ *Id.*

⁶⁸ *Id.*

90. The case study then notes that “[s]ince edX implemented Twilio Segment, [edX] can easily send its data to any app on the platform ... Twilio Segment transforms and sends along its data automatically.”⁶⁹

91. Accordingly, Defendants have admitted that they leverage the Segment API to intentionally and knowingly drive revenue on their App through marketing, advertising, and analytics.

92. Further, common sense dictates that sophisticated media producers and distributors like Defendants who include several APIs in their App focused on marketing, advertising, and analytics are fully aware of the scope of the data the Braze, Google, and Twilio are collecting, and are choosing to intentionally provide that data to Braze, Google, and Twilio.

IV. EXPERIENCE OF PLAINTIFF

93. In or about October 2015, Plaintiff Henry De La Paz downloaded the App on his Apple iPhone.

94. Plaintiff De La Paz used the App regularly from October 2015 to November 2023. During that time, he used the App to watch various edX course lectures and videos.

95. At all times relevant, Plaintiff De La Paz never consented, agreed, nor otherwise permitted the App to disclose his PII to third parties.

96. Likewise, Defendants never gave Plaintiff De La Paz the opportunity to prevent the App from disclosing his PII to third parties.

97. Nevertheless, each time Plaintiff De La Paz viewed a video on the App, Defendants disclosed their PII to Braze via the Braze API. Specifically, Defendants disclosed to Braze via the Braze API Plaintiff’s: (i) e-mail address; (ii) username; (iii) Braze user ID; and (iv)

⁶⁹ *Id.*

video-viewing information in the form of the video title, video URL, video ID, video category, and the fact that Plaintiff actually viewed a video for each specific video watched by Plaintiff. Using this information, Braze was able to identify Plaintiff and attribute his video viewing records to an individualized profile of Plaintiff in its databases. Indeed, even an ordinary person could identify Plaintiff using the data Defendants disclosed to Braze. Plaintiff's PII was also used to create a user profile that included his activity on the App, which Defendants use for marketing, advertising, and analytics purposes.

98. In addition, each time Plaintiff De La Paz viewed a video on the App, Defendants disclosed his PII to Google via the Firebase SDK. Specifically, Defendants disclosed to Google via the Firebase SDK Plaintiff's: (i) email address; (ii) username; (iii) AAID; and (iv) video-viewing information in the form of the video title, video URL, video ID, video category, and the fact that Plaintiff actually viewed a video for each specific video watched by Plaintiff. Using this information, Google was able to identify Plaintiff and attribute his video viewing records to an individualized profile of Plaintiff in its databases. Indeed, even an ordinary person could identify Plaintiff De La Paz using the data Defendants disclosed to Google. Plaintiff's PII was also used to create a user profile that included Plaintiff's activity on the App, which Defendants use for marketing, advertising, and analytics purposes.

99. Further, each time each Plaintiff viewed a video on the App, Defendants disclosed his PII to Twilio via the Segment API. Specifically, Defendants disclosed to Twilio via the Segment API Plaintiff's: (i) e-mail address; (ii) username; (iii) Segment user ID; and (iv) video-viewing information in the form of the video title, video URL, video ID, video category, and the fact that Plaintiff actually viewed a video for each specific video watched by Plaintiff. Using this information, Twilio was able to identify Plaintiff and attribute his video viewing records to

an individualized profile of Plaintiff in its databases. Indeed, even an ordinary person could identify Plaintiff using the data Defendants disclosed to Twilio. Plaintiff's PII was also used to create a user profile that included his activity on the App, which Defendants use for marketing, advertising, and analytics purposes.

PARTIES

100. Plaintiff Henry De La Paz is, and has been at all relevant times, a resident of California and has an intent to remain there. Plaintiff De La Paz is therefore a citizen of California.

101. Defendant edX, LLC is a Delaware limited liability company whose principal place of business is located at 141 Portland Street, Cambridge, Massachusetts 02139. EdX developed, owned, and operated the App until 2021, which is used throughout the Commonwealth of Massachusetts and the United States.

102. Defendant 2U, Inc. is a Delaware corporation whose principal place of business is located at 7900 Harkins Rd Lanham, Maryland 20706. Since 2021, 2U has developed, owned, and operated the App, which is used throughout the Commonwealth of Massachusetts and the United States.

JURISDICTION AND VENUE

103. This Court has subject matter jurisdiction over this action pursuant to 28 U.S.C. § 1331 because it arises under a law of the United States (the VPPA).

104. This Court also has subject matter jurisdiction over this civil action pursuant to 28 U.S.C. § 1332(d) because there are more than 100 class members, the aggregate amount in controversy exceeds \$5,000,000, exclusive of interest, fees, and costs, and at least one Class member is a citizen of a state different from both Defendants.

105. Defendant edX is an “unincorporated association” under the Class Action Fairness Act (“CAFA”), 28 U.S.C. § 1332(d), and Defendant edX is therefore “a citizen of the State where it has its principal place of business [Massachusetts] and the State under whose laws it is organized [Delaware].” *See* 28 U.S.C. § 1332(d)(10).

106. This Court has personal jurisdiction over Defendants because the App collected and disseminated the personally identifiable information giving rise to this lawsuit in this District. Specifically, Defendant 2U conducts substantial business in this District, Defendant edX resides in this District, and the conduct giving rise to this action arises out of and relates to those businesses. Further, Defendants contract with multiple Massachusetts-based universities, including Berklee College of Music, Boston University, Harvard University, and Massachusetts Institute of Technology, to provide the course content featured on the App.⁷⁰ Defendant edX is also headquartered in Massachusetts.

107. Defendants derive substantial revenue from showing advertising to their users in the Commonwealth of Massachusetts, and those advertisements are directly targeted at and tailored to Massachusetts users based on their location in Massachusetts. Through the collection of users’ data, described above, Defendants are able to hyper-target users with advertising most relevant to them.

108. Venue is proper in this District pursuant to 28 U.S.C. § 1391 because a substantial part of the events giving rise to the claim occurred in this District.

⁷⁰ *See, e.g.*, Schools and Partners, EDX, <https://www.edx.org/schools-partners> (last accessed Apr. 18, 2024).

CLASS ALLEGATIONS

109. **Class Definition:** Plaintiff seeks to represent a class of similarly situated individuals defined as all persons in the United States who viewed a pre-recorded video on the App and had their PII transmitted to a third party (the “Class”).

110. Subject to additional information obtained through further investigation and discovery, the above-described Class may be modified or narrowed as appropriate, including through the use of multi-state subclasses.

111. **Numerosity (Fed. R. Civ. P. 23(a)(1)):** At this time, Plaintiff does not know the exact number of members of the aforementioned Class. However, given the popularity of the App, the number of persons within the Class is believed to be so numerous that joinder of all members is impractical.

112. **Commonality and Predominance (Fed. R. Civ. P. 23(a)(2), 23(b)(3)):** There is a well-defined community of interest in the questions of law and fact involved in this case. Questions of law and fact common to the members of the Class that predominate over questions that may affect individual members of the Class include:

- (a) whether Defendants collected Plaintiff’s and the Class’ PII;
- (b) whether Defendants unlawfully disclosed and continues to disclose their users’ PII, including their video viewing records, in violation of the VPPA;
- (c) whether Defendants’ disclosures were committed knowingly; and
- (d) whether Defendants disclosed Plaintiff’s and the Class’ PII without consent.

113. **Typicality (Fed. R. Civ. P. 23(a)(3)):** Plaintiff’s claims are typical of those of the Class because Plaintiff, like all members of the Classes, watched videos on the App and had his PII collected and disclosed by Defendants to third parties.

114. **Adequacy (Fed. R. Civ. P. 23(a)(4)):** Plaintiff has retained and is represented by qualified and competent counsel who are highly experienced in complex consumer class action litigation, including litigation concerning the VPPA and its state-inspired offspring. Plaintiff and his counsel are committed to vigorously prosecuting this class action. Moreover, Plaintiff is able to fairly and adequately represent and protect the interests of the Class. Neither Plaintiff nor his counsel have any interest adverse to, or in conflict with, the interests of the absent members of the Class. Plaintiff has raised viable statutory claims, or the type reasonably expected to be raised by members of the Class and will vigorously pursue those claims. If necessary, Plaintiff may seek leave of this Court to amend this Class Action Complaint to include additional representatives to represent the Class, additional claims as may be appropriate, or to amend the definition of the Class to address any steps that Defendants took.

115. **Superiority (Fed. R. Civ. P. 23(b)(3)):** A class action is superior to other available methods for the fair and efficient adjudication of this controversy because individual litigation of the claims of all members of the Class is impracticable. Even if every member of the Class could afford to pursue individual litigation, the court system could not. It would be unduly burdensome to the courts in which individual litigation of numerous cases would proceed. Individualized litigation would also present the potential for varying, inconsistent, or contradictory judgments, and would magnify the delay and expense to all parties and to the court system resulting from multiple trials of the same factual issues. By contrast, the maintenance of this action as a class action, with respect to some or all of the issues presented herein, presents few management difficulties, conserves the resources of the parties and of the court system and protects the rights of each member of the Class. Plaintiff anticipates no difficulty in the management of this action as a class action.

CAUSE OF ACTION

COUNT I
Violation Of The VPPA,
18 U.S.C. § 2710

116. Plaintiff De La Paz incorporates the foregoing allegations as if fully set forth herein.

117. Plaintiff brings this claim individually and on behalf of the members of the proposed Class against Defendants.

118. Defendants are “video tape service provider[s]” as defined by the VPPA because they collaborate to “engage in the business, in or affecting interstate or foreign commerce, of rental, sale, or delivery of prerecorded video cassette tapes or similar audio visual materials,” 18 U.S.C.

§ 2710(a)(4), inasmuch as they provide videos (*i.e.*, “similar audio visual materials” under the VPPA’s definition) to consumers via their App.

119. Plaintiff and members of the Class are “consumers” as defined by the VPPA because they downloaded, installed, and watched videos using the Apps. 18 U.S.C. § 2710(a)(1). Under the VPPA, therefore, Plaintiff and members of the Class are “subscribers” of “goods or services from a video tape service provider.” 18 U.S.C. § 2710(a)(1); *see also Yershov v. Gannett Satellite Information Network, Inc.*, 820 F.3d 482, 487-89 (1st Cir. 2016).

120. Plaintiff and members of the Class viewed videos using the App. During these occasions, the Apps disclosed Plaintiff’s and members of the Class’ PII. Specifically:

- Plaintiff’s and Class Members’: (i) e-mail addresses; (ii) usernames; (iii) user IDs; (iv) video URLs; and (v) the video IDs and video titles of the videos watched by Plaintiff and Class Members were disclosed to Braze via the Braze API.

- Plaintiff's and Class Members': (i) e-mail addresses, (ii) usernames; (iii) user IDs and AAIDs; (iv) video URLs; and (v) the video IDs and video titles of the videos watched by Plaintiff and Class Members were disclosed to Google via the Firebase SDK.
- Plaintiff's and Class Members': (i) e-mail addresses; (ii) usernames; (iii) user IDs; (iv) video URLs; and (v) the video IDs and video titles of the videos watched by Plaintiff and Class Members were disclosed to Twilio via the Segment API.

121. The App's transmissions of Plaintiff's and Class members' PII to Braze Google, and Twilio via the Braze API, Firebase SDK, and Segment API constitute "knowing[] disclosures" of Plaintiff's and members of the Classes' "personally identifiable information" to a person as proscribed by the VPPA. 18 U.S.C. § 2710(a)(1).

122. Under the VPPA, the term "personally identifiable information" "includes information which identifies a person as having requested or obtained specific video materials or services from a video tape service provider." 18 U.S.C. § 2710(a)(3). The information disclosed by the App constitutes "personally identifiable information" because it allows even an ordinary person to identify Plaintiff and members of the Class, as well as which specific videos were watched by Plaintiff and the Class. The disclosures also make it "reasonably and foreseeably likely to reveal" which specific App videos were obtained by each Plaintiff and each member of the Classes.

123. Plaintiff and members of the Class did not provide Defendants with any form of consent—either written or otherwise—to disclose their PII to third parties.

124. Nor were Defendants' disclosures made in the "ordinary course of business" as the term is defined by the VPPA. In particular, the Apps' disclosures to Braze, Google, and Twilio were not necessary for "debt collection activities, order fulfillment, request processing, [or] transfer of ownership." 18 U.S.C. § 2710(a)(2).

125. On behalf of themselves and the Class, Plaintiff seeks: (i) declaratory relief; (ii) injunctive and equitable relief as is necessary to protect the interests of Plaintiff and the Class by requiring Defendants to comply with VPPA's requirements for protecting a consumer's PII; (iii) statutory damages of \$2,500 for each violation of the VPPA pursuant to 18 U.S.C. § 2710(c); and (iv) reasonable attorneys' fees and costs and other litigation expenses.

PRAYER FOR RELIEF

WHEREFORE, Plaintiff seeks a judgment against Defendants, individually and on behalf of all others similarly situated, as follows:

- (a) For an order certifying the Classes under Rule 23 of the Federal Rules of Civil Procedure, naming Plaintiff De La Paz as the representative of the Class, and naming Plaintiff's attorneys as Class Counsel to represent the Class;
- (b) For an order declaring that Defendants' conduct violates the statutes referenced herein;
- (c) For an order finding in favor of Plaintiff and the Class on all counts asserted herein;
- (d) An award of statutory damages to the extent available;
- (e) For punitive damages, as warranted, in an amount to be determined at trial;
- (f) For prejudgment interest on all amounts awarded;
- (g) For injunctive relief as pleaded or as the Court may deem proper; and
- (h) For an order awarding Plaintiff and the Class their reasonable attorneys' fees and expenses and costs of suit.

JURY DEMAND

Pursuant to Fed. R. Civ. P. 38(b)(1), Plaintiff demands a trial by jury of all issues so triable.

Dated: April 19, 2024

Respectfully submitted,

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ClassAction.org

This complaint is part of ClassAction.org's searchable class action lawsuit database and can be found in this post: [Class Action Lawsuit Says edX App Unlawfully Shares User Data with Google, Others](#)
