

**IN THE UNITED STATES DISTRICT COURT  
FOR THE EASTERN DISTRICT OF VIRGINIA  
Alexandria Division**

MAPLEBEAR INC. d/b/a INSTACART, a )  
Delaware corporation, )

Plaintiff, )

v. )

JOHN DOES 1-2, CONTROLLING AND )  
OPERATING A MALICIOUS )  
APPLICATION KNOWN AS SHOPPER )  
HELPER, )

Defendants. )

Civil Action No: 1:21-cv-00474 (AJT/IDD)

---

**DECLARATION OF VINCAS D. ČIŽIŪNAS IN SUPPORT OF INSTACART’S NOTICE  
OF MOTION FOR CONTEMPT SANCTIONS, OR IN THE ALTERNATIVE FOR  
ISSUANCE OF AN ORDER TO SHOW CAUSE RE CONTEMPT AGAINST JOHN  
DOES 1-2 AND LIMITED EXPEDITED DISCOVERY**

I, Vincas D. Čižiūnas declare as follows:

1. I am the Intelligence Fellow at Nisos Holdings Inc. (“Nisos”). I make this declaration in support of Instacart’s Notice of Motion for Contempt Sanctions, or in the Alternative for Issuance of An Order to Show Cause Re Contempt Against John Does 1-2 And Limited Expedited Discovery. I make this declaration of my own personal knowledge or on information and belief where indicated and based on my review of records Instacart maintains in the ordinary course of business. If called as a witness, I could and would testify competently to the truth of the matters set forth herein.

2. In my role at Nisos, I assess technological security threats within client engagements and assess the impacts of such threats on our clients. Among my responsibilities are researching and assessing technology trends used by cybercriminals for data extraction and exploitation. In addition, I study data analytics and digital data extraction to study target network analytics, seek attribution of cybercriminals, and produce triage scripts to assist in the analysis of

technical collection. Before joining Nisos, I performed as a key member of several teams at companies addressing security vulnerabilities and performing forensic analysis of anomalies found in customer networks. I have more than ten years of experience in extraction, transformation, and loading of data sets ranging from hundreds to billions of records. A true and correct copy of the current version of my curricula vitae is attached to this declaration as **Exhibit 1**.

3. Nisos was engaged by Instacart to investigate the technical details and functionalities of an application called LuckyBot, and to determine attribution. Specifically, whether the actors behind LuckyBot are connected to or use similar infrastructure as the Shopper Helper bot actors. LuckyBot is an application that supports abuse of Instacart, Spark, Veho, and other gig platforms. Shopper Helper is an unauthorized third-party mobile application that misuses Instacart’s software to enable its users to filter and automatically select certain batches of customer orders from Instacart’s genuine application known as the “Shopper App” and the issue central to the genesis of the original Complaint in this case, filed on April 16, 2021. Dkt. 01.

## **I. DEFENDANTS**

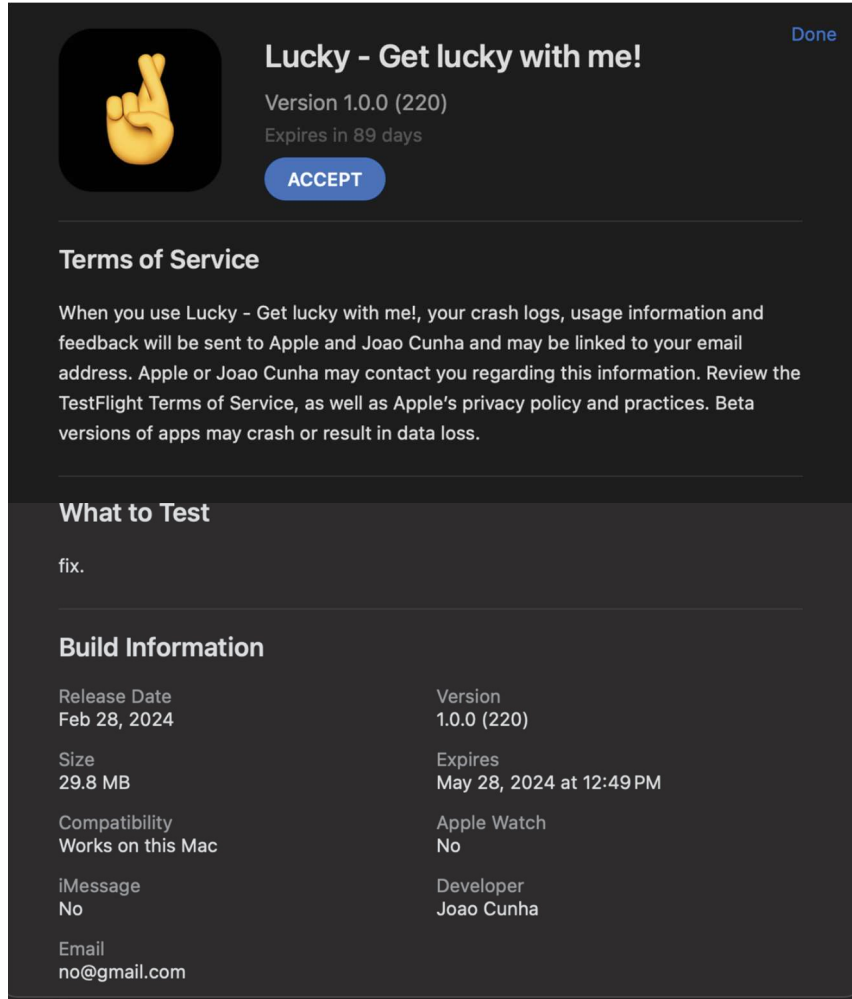
4. The identities and specific locations of the Defendants who have set up and operate LuckyBot are currently uncertain. However, based on our investigation, we have determined that LuckyBot is using infrastructure located in the United States as well as other countries. The actors operating LuckyBot also may be located in different countries.

5. Defendants make LuckyBot available to the public through the use of [an infrastructure comprised of Internet domains and IP addresses maintained on an interconnected network] and use Apple’s TestFlight software in order to distribute its application. It is my understanding at this time that only through this infrastructure can LuckyBot be obtained.

## **II. OVERVIEW OF INVESTIGATION INTO DEFENDANTS**

6. My declaration concerns a third-party iOS application known as LuckyBot. LuckyBot is a third-party mobile application that is designed to circumvent Instacart’s batching process. LuckyBot introduces unauthorized functions and bugs to Instacart’s Shopper App.

LuckyBot’s uses Apple’s TestFlight software in order to distribute its application. **Figure 1** displays the TestFlight entry for the LuckyBot application.



**Figure 1.**

7. Instacart’s Shopper App is the primary way Shoppers interact with Instacart. After accessing the Shopper App, the Shopper can indicate their availability to receive and accept orders at their discretion. The Shopper App provides a matching function based on a complex algorithm to offer customer orders to Shoppers, using proprietary software. Orders are offered in “batches” consisting of one or more orders to be shopped and delivered together.

8. The unauthorized functionality of LuckyBot is similar to that of Shopper Helper,

which includes: automatically filtering and selecting the ‘best batch’ for a user, bypassing the designed Instacart native batch selection and offering process. LuckyBot includes technology that unfairly leverages filters, such as the geographic proximity of the grocery store, the delivery distance, and the earning potential, and automatically accepts orders at a speed faster than human Shoppers are typically able and in a manner that may prevent Shoppers using the legitimate Instacart Shopper App from accepting such orders.

9. I, along with my team at Nisos, examined the LuckyBot application that the Defendants make available for the public. We researched the infrastructure and platforms used to offer LuckyBot to the public to understand its functionalities. Through these and related investigation steps, Nisos has developed detailed information concerning the scope and illegal activities of LuckyBot.

10. Defendants make the LuckyBot app available through infrastructure comprised of Internet domains, an IP address and associated social media accounts. Such domains include “lucky-bot.notion[.]site.” An IP address can be thought of as the location on the Internet of a particular computer. An “IP address” is a unique string of numbers separated by a period, such as “45.76.50.7” that identifies each computer attached to the Internet. Defendants must lease such computers from companies that provide “hosting” services, and which assign to those computers particular IP addresses. The hosting company refers to a type of company that specializes in offering computer hardware and software connection to the Internet, technical support, and other services to companies and individuals seeking to have some presence on the Internet.

11. Defendants leverage the same hosting provider used by Shopper Helper. LuckyBot’s website describes a two-step process that involves the use of Apple’s TestFlight app. **Figure 2** below, shows LuckyBot website describing the installation of the application. This application allows users to test early-release versions of apps for developers prior to submission for approval and review by Apple. Upon Nisos’ examination of the app, the initial execution of the application revealed that the host communicates with IP address 45.76.50.7. This IP is running

a webserver with an SSL certificate for domain 7dbox[.]com. Conducting a reverse IP search, the results point to the IP address 45.76.50.7.vultrusercontent[.]com. This indicates the use of Vultr hosting,<sup>1</sup> the hosting provider previously used by Shopper Helper.

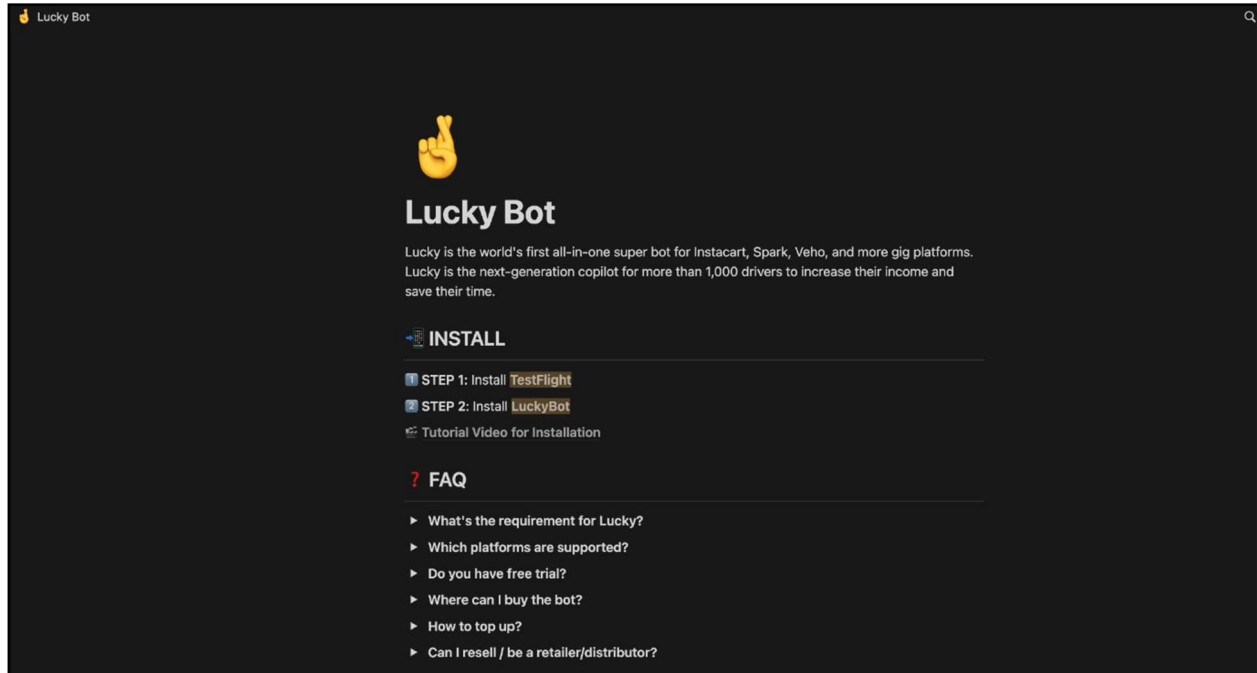


Figure 2.

12. Defendants leverage social media in order to market LuckyBot and encourage new users to join. Nisos identified five active and two non-active social media platforms attributed to the “Lucky” application across YouTube, TikTok, Telegram, and WhatsApp. See **Figure 3** below. Each platform published similar content promoting the installation of the application “Lucky” using TestFlight and coordinating instructions with the Telegram channel @luckydoog\_bot and the WhatsApp number “+12028195519,” with a Washington, D.C. area code. Of note across all social media profiles each promoted language support in English, Spanish, and Portuguese as well

---

<sup>1</sup> Vultr is a provider of various cloud platforms and Virtual Private Servers (VPS). Their VPS hosting services and cloud storage platform solutions offer a virtualized server environment, allowing users to have dedicated server resources and control over their cloud hosting environment.

as provided shortened URLs to application support web pages using “encurtador[.]dev” a Portuguese URL shortener application.

| PLATFORM | URL  |
|----------|--|
| Youtube  | https://www.youtube[.]com/@Lucky-SuperBot (Created: Feb 22, 2024)<br>https://www.youtube[.]com/@LuckySuperBot (Not Active) (Created: Jan 7, 2024)  |
| TikTok   | https://www.tiktok[.]com/@luckybottech (Created: Jan 18, 2024)<br>https://www.tiktok[.]com/@luckybatchgrabber (Not Active) (Created: Jan 15, 2024) |
| Telegram | https://t[.]me/luckydooog_bot (Created: Aug. 2023)<br>https://t[.]me/shopperhelper (Created: Feb. 2020)  |
| WhatsApp | https://api.whatsapp[.]com/send?phone=12028195519  |

**Figure 3.**

- a. Based on social media content and URL configuration, the developers of the LuckyBot application overtly stress the ability to support multiple languages primarily English, Spanish, and Portuguese. Though, when reviewing published content there were multiple inconsistencies that indicated Chinese based influence and AI integration.
- b. Within all the videos posted on the YouTube channel @Lucky-SuperBot, the user utilized the Shadowrocket VPN/Proxy to connect to the Lucky application. Shadowrocket is a VPN/Proxy predominantly utilized within China to circumvent the Great Firewall. It also does not have a language support for Spanish/Portuguese and is not a prominent VPN used by individuals within the U.S., Brazil, or Portugal. Posted videos on both YouTube and TikTok utilized AI video development tools such as “preaching-ai[.]com” to create an AI speaker that supported the commentary within the published videos. It is also likely the YouTube and TikTok social media pages utilized language translation tools to build the English, Spanish, and Portuguese transcripts based on the contents' relevance and evidence of replicated exact translation.

13. One active and one non-active social media page listed Telegram account @shopperhelper as a coordinating reference for the “Lucky” application. Nisos previously identified this Telegram account as contact information on Shopper Helper’s website in September 2020. Investigators also confirmed that the @shopperhelper telegram account is still active and is associated with the same display name of “Sheldon.”<sup>2</sup> See **Figure 4** below.



**Figure 4.**

14. On the non-active TikTok account, @luckybatchgrabber, a previously posted walkthrough video showed a screenshot from the URL lucky-bot.notion[.]site which stated specifically Lucky was “Developed by the team behind the inventor of the first Instacart bot - ShopperHelper”. **Figure 5** below is the @luckybottech TikTok account<sup>3</sup>, which is currently active, referencing the Shopper Helper Telegram page.

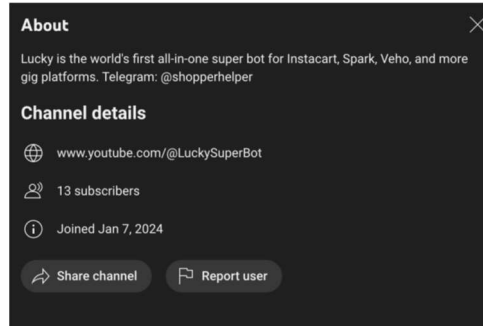


**Figure 5.**

<sup>2</sup> [https://t\[.\]me/shopperhelper](https://t.me/shopperhelper).

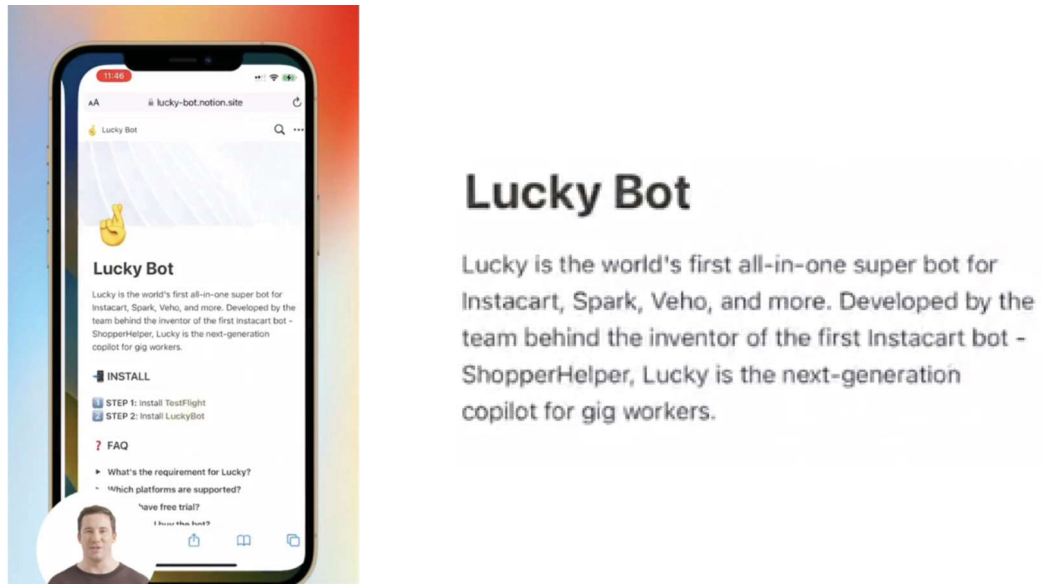
<sup>3</sup> [https://www.tiktok\[.\]com/@luckybottech](https://www.tiktok[.]com/@luckybottech).

15. **Figure 6** below shows @LuckySuperBot YouTube Account<sup>4</sup> (Non-Active) referencing @shopperhelper Telegram Page.



**Figure 6.**

16. **Figure 7** below shows @luckybatchgrabber TikTok Video<sup>5</sup> referencing a previous LuckyBot Notion<sup>6</sup> web page which states that the LuckyBot team is the inventor of the Shopper Helper bot.



**Figure 7.**

17. As with the Shopper Helper activities, Defendants are similarly leveraging

<sup>4</sup> [https://www.youtube\[.\]com/@LuckySuperBot](https://www.youtube[.]com/@LuckySuperBot).

<sup>5</sup> [https://www.tiktok\[.\]com/@luckybatchgrabber/video/7324395578719227178](https://www.tiktok[.]com/@luckybatchgrabber/video/7324395578719227178).

<sup>6</sup> Notion is productivity and note-taking web application that can create websites.

WhatsApp to facilitate LuckyBot activities. Upon further investigation of the videos posted to the YouTube channel @Lucky-SuperBot, the account showed the IMEI<sup>7</sup> and ICCID<sup>8</sup> information to the device being utilized in setting up the LuckyBot application. Both are associated with an iPhone 15 Pro Max and the network carrier T-Mobile, which is the active carrier associated with the provided WhatsApp number (202)-819-5519. Nisos used the WhatsApp number to determine a partial email and phone number affiliated with the host. Neither of these partial recovery selectors match any previous data from Shopper Helper, though further discovery into the carrier service may provide further information on the developer of the LuckyBot application using the device. See **Figure 8** below.

|  |  |
|--|--|
| IMEI: 359824379374275<br>ICCID: 8901260598728465062  | - Apple iPhone 15 Pro Max<br>- Service T-Mobile  |
| IMEI: 359824375395563<br>ICCID: 89550227001017102552 | - Apple iPhone 15 Pro Max<br>- Service T-Mobile  |
| WhatsApp: (202)-819-5519                             | - Service: T-Mobile (Active)<br>- Registered User: Shopper Support (Since 2021-10-19)<br>- Partial Email Recovered through Outlook: da*****@gmail.com<br>- Partial Number Recovered through Google: (***) - *** - **33 |

**Figure 8.**

18. Defendants likely have local presence in Florida. During Nisos’ investigation into social media activities, Tiktok user @luckybottech uploaded a video on January 18, 2024 that provided screenshots of completed orders using the supposed “Lucky” application. See **Figure 9** for a summary of the information and **Figure 10** showing screenshots of the orders. The screenshots included the neighborhoods Kendall, Country Walk, and Three Lakes. Using this information, Nisos determined that the likely store locations for the orders featured in the video

<sup>7</sup> The International Mobile Equipment Identity is a numeric identifier, usually unique, for mobile and satellite phones.

<sup>8</sup> The Integrated Circuit Card Identification number (ICCID) is an 18-22-digit number typically printed on the back of a SIM card. No two SIM cards have the same ICCID number. The ICCID is a globally unique serial number – a one-of-a-kind signature that identifies the SIM card itself.

were a Walmart Supercenter and Costco located in Kendall, FL.

- December 21, 2023: 06:05:34 EST (\$129.80), 11:57:19 EST (\$125.01)
  - Potential Store Address: 15885 SW 88th St, Kendall, FL 33196 (Walmart Supercenter)
- December 27, 2023: 15:34:43 EST (\$37.11), 16:44:29 EST (\$32.50), 18:02:23 EST (\$100.90)
  - Potential Store Address: 15885 SW 88th St, Kendall, FL 33196 (Walmart Supercenter)
- January 2, 2024: 09:54:17 EST (\$72.76)
  - Potential Store Address: 13450 SW 120th St, Miami, FL 33186 (Costco)

Figure 9.

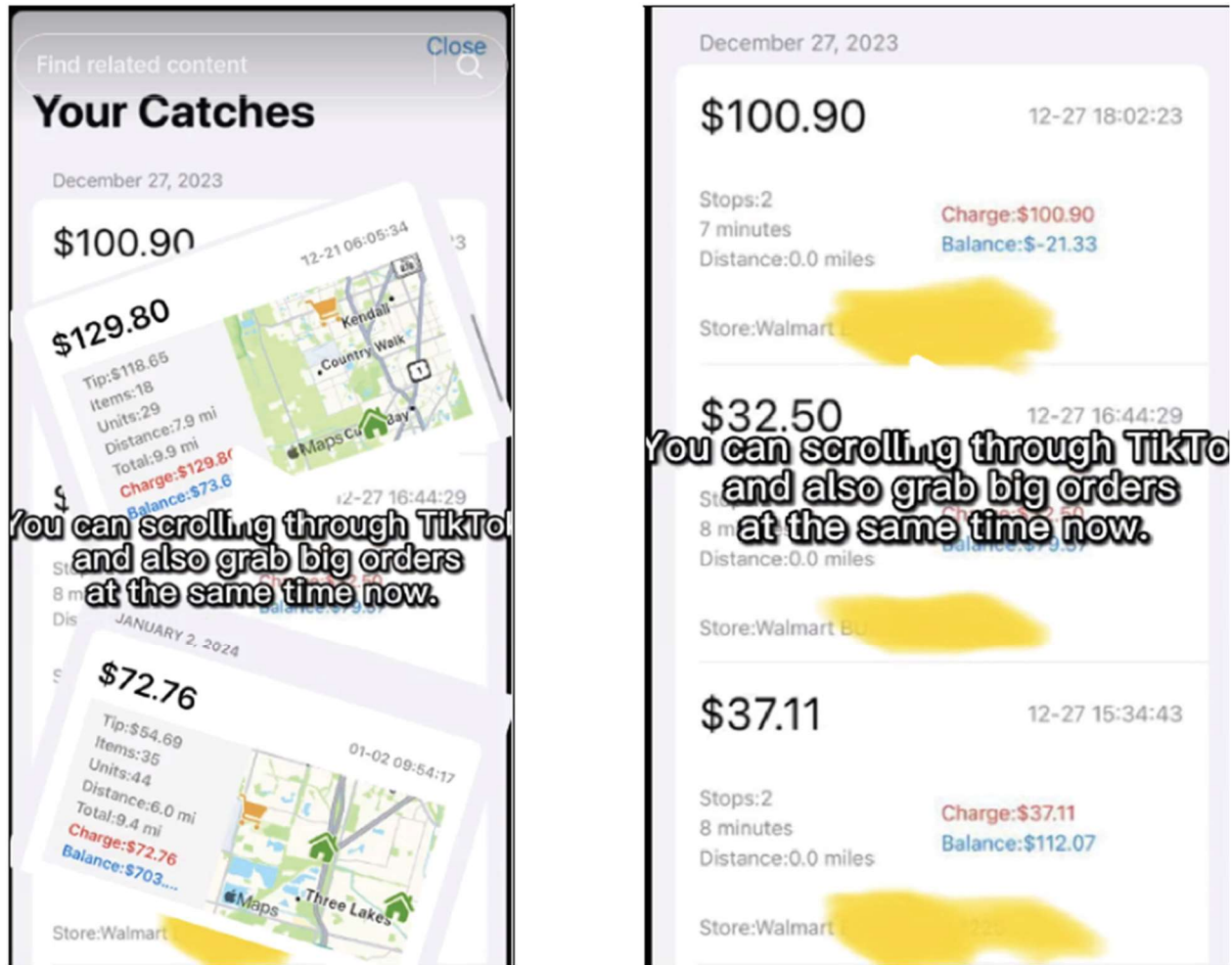


Figure 10.

### **III. LUCKYBOT CAUSES HARM TO INSTACART AND ITS SHOPPER COMMUNITY**

19. Identical to Shopper Helper, LuckyBot inflicts substantial damage on Instacart whose products and trademarks Defendants systematically abuse as part of LuckyBot operations. For example, once LuckyBot is installed on a Shopper's mobile device, it compromises the underlying code of Instacart's Shopper App. However, the compromised Shopper App does not appear any different to the user of the mobile device. Anyone viewing the Shopper Helper app, thus, would think that LuckyBot is developed and distributed by Instacart, despite the fact that it is the operators of LuckyBot that are compromising the Instacart Shopper App. This harms Instacart's reputation and goodwill among its Shopper community and the public.

20. As with Shopper Helper, once downloaded, LuckyBot makes an application programming interface ("API") wrapper call (a technical "hand-shake") to Instacart's infrastructure. An API wrapper is a tool designed to automate calling of certain functionalities from an underlying codebase. In this instance, LuckyBot's API wrap is designed to access Instacart's infrastructure to obtain batch information by appearing as the genuine Shopper App, which enables LuckyBot to obtain information regarding batches directly from Instacart's infrastructure. In addition, once LuckyBot automatically selects the batch, LuckyBot will transmit that information to Instacart's servers, hosted on Amazon Web Service ("AWS"), to claim that batch as taken and thus remove it from Instacart's legitimate Shopper App.

21. As with Shopper Helper, once LuckyBot makes the technical handshake with Instacart's infrastructure, LuckyBot will appear to the user as Instacart's Shopper App with the Shopper Helper altered functionality. However, this fraudulent version makes significant changes to Instacart's Shopper App by enabling LuckyBot to fraudulently access Instacart's servers in order to obtain batch information, masquerading as the authorized Shopper App and enabling the use of automated filtering and selection of batches.

#### **IV. LUCKYBOT'S UNAUTHORIZED ACCESS TO INSTACART'S SHOPPER APP AND INSTACART'S SERVER RESOURCES**

22. LuckyBot utilizes a capability called patching, which enables software developers to add components and functionality to existing binary code. Through patching, Defendants were able to create an application that essentially replicates Instacart's Shopper App functionalities and user interface. In effect, LuckyBot's technical architecture and utilization of patching tools enable LuckyBot to act and appear virtually identical to the Shopper App.

23. Defendants have added unauthorized functionalities to the Shopper App's binary code, including additional filtering criteria and automated selection functionality. This means that LuckyBot acts virtually the same as the Shopper App – i.e., allowing users to view batch orders, change their user profile, and access messages – but further includes the automated feature enabling LuckyBot to automatically select certain orders.

24. In this particular instance, LuckyBot is designed to reside within the same namespace as the authentic Shopper App. This process enables it to have the same access to authentication tokens and cookies. An authentication token allows users to confirm their identity in order to access an application. Generally, each time a user wishes to use a legitimate version of an application on a mobile device, the application will communicate with a server to verify the token. It is my understanding that Instacart uses an authentication token as a technical countermeasure to prevent unauthorized access to its servers.

25. Because Shopper Helper has access to this token by virtue of the namespace, it is designed to present the token to Instacart's systems and appear as the authentic Instacart Shopper App. This enables Shopper Helper to access Instacart's systems and obtain information regarding batches of orders.

26. In addition, LuckyBot requires Shoppers to enter their Instacart Shopper App credentials. At that point, LuckyBot will transmit information through the Internet to access Instacart's AWS servers, in order to obtain batch information. Because LuckyBot leverages authentic Instacart credentials, which it has intercepted without authorization, LuckyBot is able to

fraudulently circumvent Instacart's technical measures that control access to Instacart's AWS servers, intellectual property, and proprietary information including batch data.

27. Similar to Shopper Helper, LuckyBot prompts users to set criteria for batches they will accept, including the dollar amount of the order, distance from the shopper, and distance to the delivery destination. The LuckyBot app will then use those rules to automatically accept any available batches that match the criteria. This means that users of the LuckyBot app are automatically assigned batches within seconds of them becoming available through Instacart, potentially before Shoppers using the legitimate Instacart Shopper App have the opportunity to view them.

28. In addition, through our investigation my team and I discovered that LuckyBot leverages several web calls to an application programming interface ("API") known as "LetsValidate" that enables LuckyBot to validate that the application is still allowed to operate and access batch information from Instacart's Shopper App without forcing the user to reauthenticate. This API call further enables LuckyBot to regularly update the user's selection criteria for purposes of automatically selecting certain batches.

#### **V. LUCKYBOT IS DEVELOPED BY THE SAME DEFENDANTS WHO DEVELOPED SHOPPER HELPER**

29. Based on Nisos' investigation, LuckyBot uses:

- a. The same telegram ID, t[.]me/shopperhelper, as Shopperhelper with the same display name of "Sheldon."
- b. Apple's TestFlight software in order to distribute its application, loki.testthing.app, where Shopperhelper relied on jailbreak exploits to facilitate a similar end.
- c. Backend infrastructure from Vultr Hosting at IP 45.76.50.7. ShopperHelper utilized the same provider during its operational period.
- d. Domain 7dbox[.]com, registered with anonymized domain name system (DNS) provider Name[.]com, for its backend, and uses the Cloudflare content


delivery network (CDN). ShopperHelper used anonymized features of GoDaddy as a DNS provider and also used Cloudflare to provide further masking of backend infrastructure.

30. Nisos assesses that while LuckyBot may be differently architected than Shopper Helper, due to the flexibility provided by Apple's TestFlight program, because of use of the Shopper Helper Telegram channel with display name of Sheldon, the use of nearly the same anonymization infrastructure, and the claim that it is developed by the Shopper Helper team, the application is likely developed and managed by the producers of Shopper Helper.

31. Granting Instacart possession of infrastructure domains, disabling the IP address, and disabling the social media accounts will enable Instacart to prevent their use to support the fraudulent LuckyBot app and prevent the Defendants who similarly developed Shopper Helper, from continuing their trespass of Instacart's servers, infringement of Instacart's trademarks, and harm to Instacart's users. In addition, disabling this infrastructure would disrupt the Defendants' ability to distribute their unlawful application to other mobile devices. Disabling this infrastructure will directly disrupt current LuckyBot distribution mechanisms, mitigating risk and injury to Instacart, its Shoppers, and the public.

I declare under penalty of perjury under the laws of the United States of America that the foregoing is true and correct to the best of my knowledge.

Executed this 22 day of April, 2024, in Leesburg, Virginia.

DocuSigned by:  
  
4CA993F2B56748A...  
Vincas D. Ciziunas