

## PATENT ASSIGNMENT COVER SHEET

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<b>SUBMISSION TYPE:</b>	NEW ASSIGNMENT	
<b>NATURE OF CONVEYANCE:</b>	ASSIGNMENT	
<b>CONVEYING PARTY DATA</b>		
	<b>Name</b>	<b>Execution Date</b>
	VINCENT PHAM	11/05/2019
	ANH TRUONG	11/05/2019
	MARK WATSON	11/05/2019
	REZA FARIVAR	11/05/2019
	FARDIN ABDI TAGHI ABAD	11/07/2019
	JEREMY GOODSITT	11/05/2019
	AUSTIN WALTERS	11/05/2019
<b>RECEIVING PARTY DATA</b>		
<b>Name:</b>	CAPITAL ONE SERVICES, LLC	
<b>Street Address:</b>	1680 CAPITAL ONE DRIVE	
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<b>State/Country:</b>	VIRGINIA	
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<b>PROPERTY NUMBERS Total: 1</b>		
	<b>Property Type</b>	<b>Number</b>
	Application Number:	16675439
<b>CORRESPONDENCE DATA</b>		
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<b>Correspondent Name:</b>	HUNTON ANDREWS KURTH LLP	
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<b>ATTORNEY DOCKET NUMBER:</b>	067519.0002195	
<b>NAME OF SUBMITTER:</b>	ANDREW D. KASNEVICH	
<b>SIGNATURE:</b>	/Andrew D. Kasnevich/	
<b>DATE SIGNED:</b>	11/07/2019	

**Total Attachments: 4**

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**ASSIGNMENT AND DECLARATION FOR UTILITY OR DESIGN PATENT APPLICATION**

I am an inventor (referred to below as Assignor) of an invention entitled:

**SYSTEMS AND METHODS FOR DISTORTING CAPTCHA IMAGES WITH GENERATIVE ADVERSARIAL NETWORKS**

filed herewith. Capital One Services, LLC, a corporation of Delaware whose post office address is 1680 Capital One Drive, McLean, VA 22102 (hereinafter referred to as Assignee), desires to obtain an assignment of this invention;

THEREFORE, for good and valuable consideration, I have sold, assigned, transferred, and set over, and do hereby sell, assign, transfer, and set over to Assignee, its successors and assigns, my entire right, title, and interest in and to this invention, patent Application No. 16/675,439, filed November 6, 2019, and this application, and all divisions, and continuations thereof, and all Letters Patent of the United States which may be granted thereon, and all reissues and reexaminations thereof, and all rights to claim priority in any foreign country on the basis of the above provisional application (if any), as well as all rights to claim priority on the basis of this application in any foreign country, and all applications for Letters Patent which may become filed for this invention in any foreign country and all Letters Patent which may be granted on this invention in any foreign country, and all extensions, renewals, reexaminations and reissues thereof; and I authorize and request the Director of the United States Patent and Trademark Office (USPTO) and any official of any foreign country whose duty it is to issue patents on applications as described above, to issue all Letters Patent for this invention to Assignee, its successors and assigns, in accordance with the terms of this Assignment;

AND, I covenant that I have the full right to convey the interest assigned by this Assignment, and I have not executed and will not execute any agreement in conflict with this Assignment;

AND, I further covenant and agree that I will, without further consideration, communicate with Assignee, its successors and assigns, any facts known to me respecting this invention, and testify in any legal proceeding, sign all lawful papers when called upon to do so, execute and deliver any and all papers that may be necessary or desirable to perfect the title to this invention in said Assignee, its successors or assigns, execute all divisional, continuation, and reissue applications, make all rightful oaths and generally do everything possible to aid Assignee, its successors and assigns, to obtain and enforce proper patent protection for this invention in the United States and any foreign country, it being understood that any expense incident to the execution of such papers shall be borne by the Assignee, its successors and assigns.

AND, I authorize and request that the attorneys having Power of Attorney in this application, insert here in parentheses (Application No. 16/675,439, filed November 6, 2019) the filing date and application number of said application when known.

**DECLARATION:**

As a named inventor below, I declare that: (1) This declaration is directed to the above-identified application; (2) the above-identified application was made or authorized to be made by me; (3) my residence and mailing address are as stated below next to my name; and (4) I believe I am an original inventor or an original joint inventor of a claimed invention in the application. I acknowledge that any willful false statements made in this declaration are punishable by fine or imprisonment of not more than five (5) years, or both, under section 1001 of Title 18 of the United States Code.

As a below named inventor, I have reviewed and understand the contents of the application, including the claims, and am aware of the duty to disclose to the USPTO all information known to me to be material to patentability as defined in 37C.F.R. § 1.56.

## Assignor (Inventor) 1:

Name: Vincent PHAM  
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Signature: *Vincent Pham*  
Date: 11/5/2019

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Signature: *Anh Truong*  
Date: 11/5/2019

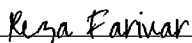
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Signature: *Mark Watson*  
Date: 11/5/2019


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Signature:   
Date: 11/5/2019


## Assignor (Inventor) 5:

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Signature:   
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Name: Austin WALTERS

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Signature: *Austin Walters*

Date: 11/5/2019