CLAIMS

1. An apparatus, comprising:

a processor; and

a memory storing instructions which when executed by the processor cause the processor to:

receive, by an application executing on the processor from a contactless card, action data used to determine an action associated with a tap of the contactless card to the apparatus;

determine a context of the application based on at least one function associated with a current display output of a page of the application;

generate, by a machine learning (ML) model executing on the processor, a predicted action based on the action data and the context of the application; and

initiate, by the application, performance of the predicted action.

~~2. The apparatus of claim 1, the memory storing instructions which when executed by the processor cause the processor to:~~

~~determine a context of the application based on at least one function associated with a current output of the application, the current output of the application comprising a page outputted on a display of the apparatus, wherein the predicted action is further generated based on the determined context.~~

2~~3~~. The apparatus of claim 1, the memory storing instructions which when executed by the processor cause the processor to, prior to initiating performance of the predicted action:

receive, by the application, a rule for initiating the performance of the predicted action; and

determine, by the application, that an account associated with the contactless card satisfies the rule.

3~~4~~. The apparatus of claim 1, the memory storing instructions which when executed by the processor cause the processor to:

generate, by the ML model based on the action data, a plurality of predicted actions including the predicted action;

compute, by the ML model, a respective score for each of the predicted actions; and

select, by the ML model, the predicted action based on the scores of each predicted action.

45. The apparatus of claim 1, wherein the ML model is generated based on training data describing a plurality of actions performed responsive to a plurality of taps of a plurality of contactless cards to a plurality of devices, wherein the predicted action comprises one or more of: (i) a phone call, (ii) loading a page of the application, (iii) activating a component of an operating system (OS) executing on the processor, (iv) accessing a function of a different application executing on the OS, and (v) activating the contactless card.

56. The apparatus of claim 1, the memory storing instructions which when executed by the processor cause the processor to:

receive input specifying a user-defined action to associate with the tap of the contactless card to the apparatus and a context of the application; and

cause an indication of the user-defined action being associated with the tap of the contactless card to the apparatus and the context of the application to be stored in a memory of the contactless card.

67. The apparatus of claim 1, the memory storing instructions which when executed by the processor cause the processor to:

determine, by the application, that the action data comprises a uniform resource locator (URL); and

open, by the application, a page of the application associated with the URL.

78. A computer-readable storage medium having computer-readable program code embodied therewith, the computer-readable program code executable by a processor circuit of a device to cause the processor circuit to:

receive, by an application executing on the processor from a contactless card, action data used to determine an action associated with a tap of the contactless card to the device;

determine, by the application, a context of the application based on at least one function associated with a current display output of a page of the application;

generate, by a machine learning (ML) model executing on the processor, a predicted action based on the action data and the context of the application; and

initiate, by the application, performance of the predicted action.

~~9. The computer-readable storage medium of claim 8, further comprising computer-readable program code executable by the processor circuit to cause the processor circuit to:~~

~~determine a context of the application based on at least one function associated with a current output of the application, the current output of the application comprising a page outputted on a display of the device, wherein the predicted action is further generated based on the determined context.~~

8~~10~~. The computer-readable storage medium of claim 7~~8~~, further comprising computer-readable program code executable by the processor circuit to cause the processor circuit to, prior to initiating performance of the predicted action:

receive, by the application, a rule for initiating the performance of the predicted action; and

determine, by the application, that an account associated with the contactless card satisfies the rule.

9~~11~~. The computer-readable storage medium of claim 7~~8~~, further comprising computer-readable program code executable by the processor circuit to cause the processor circuit to:

generate, by the ML model based on the action data, a plurality of predicted actions including the predicted action;

compute, by the ML model, a respective score for each of the predicted actions; and

select, by the ML model, the predicted action based on the scores of each predicted action.

10~~12~~. The computer-readable storage medium of claim 7~~8~~, wherein the ML model is generated based on training data describing a plurality of actions performed responsive to a plurality of taps of a plurality of contactless cards to a plurality of devices, wherein the predicted action comprises one or more of: (i) a phone call, (ii) loading a page of the application, (iii) activating a component of an operating system (OS) executing on the processor, (iv) accessing a function of a different application executing on the OS, and (v) activating the contactless card.

113. The computer-readable storage medium of claim 78, further comprising computer-readable program code executable by the processor circuit to cause the processor circuit to:

receive input specifying a user-defined action to associate with the tap of the contactless card to the device and a context of the application; and

store, in a memory of the contactless card, an indication of the user-defined action as being associated with the tap of the contactless card to the device and the context of the application.

124. The computer-readable storage medium of claim 78, further comprising computer-readable program code executable by the processor circuit to cause the processor circuit to:

determine, by the application, that the action data comprises a uniform resource locator (URL); and

open, by the application, a page of the application associated with the URL.

135. A computer-implemented method, comprising:

receiving, by an application executing on a processor of a device from a contactless card, action data used to determine an action associated with a tap of the contactless card to the device;

determining, by the application, a context of the application based on at least one function associated with a current display output of a page of the application;

generating, by a machine learning (ML) model executing on the processor, a predicted action based on the action data and the context of the application; and

initiating, by the application, performance of the predicted action.

~~16. The method of claim 15, further comprising:~~

~~determining a context of the application based on at least one function associated with a current output of the application, the current output of the application comprising a page outputted on a display of the device, wherein the predicted action is further generated based on the determined context.~~

147. The method of claim 135, further comprising prior to initiating performance of the predicted action:

receiving, by the application, a rule for initiating the performance of the predicted action; and

determining, by the application, that an account associated with the contactless card satisfies the rule.

158. The method of claim 135, further comprising:

generating, by the ML model based on the action data, a plurality of predicted actions including the predicted action;

computing, by the ML model, a respective score for each of the predicted actions; and

selecting, by the ML model, the predicted action based on the scores of each predicted action.

169. The method of claim 135, wherein the predicted action comprises one or more of: (i) a phone call, (ii) loading a page of the application, (iii) activating a component of an operating system (OS) executing on the processor, (iv) accessing a function of a different application executing on the OS, and (v) activating the contactless card, the method further comprising:

receiving input specifying a user-defined action to associate with the tap of the contactless card to the device and a context of the application; and

storing, in a memory of the contactless card, an indication of the user-defined action as being associated with the tap of the contactless card to the device and the context of the application.

1720. The method of claim 135, wherein the ML model is generated based on training data describing a plurality of actions performed responsive to a plurality of taps of a plurality of contactless cards to a plurality of devices, wherein the device is one of the plurality of devices, the method further comprising:

determining, by the application, that the action data comprises a uniform resource locator (URL); and

opening, by the application, a page of the application associated with the URL.