COMPONENT IDENTIFICATION METHOD, ELECTRONIC DEVICE AND STORAGE MEDIUM

CROSS-REFERENCE TO RELATED APPLICATIONS

This application is a National Stage Application of International Patent Application No. PCT/CN2022/134361, filed on November 25, 2022, which is based on and claims the priority of the Chinese patent application No. 20211142220.6 filed on November 26, 2021, the disclosure of both of which are hereby incorporated as a whole into the present application.

TECHNICAL FIELD

The present disclosure relates to the field of computer technology, and relates to a component identification method and apparatus, an electronic device, and a storage medium.

BACKGROUND

In a front-end business development process, in order to generate corresponding user interface (UI) codes in a visual mockup by component codes, it is necessary to manually identify and annotate UI component types corresponding to nodes in a corresponding document object model (DOM). The above approach has a problem of low efficiency.

SUMMARY

According to one aspect of one or more embodiments of the present disclosure, there is provided a component identification method, comprising:

inputting a first image into a set identification model to obtain at least one UI block in the first image outputted by the set identification model, wherein the first image is determined on the basis of a first visual mockup, the set identification model

is used for identifying the at least one UI block in an inputted image, and each UI block at least comprises an image region obtained by UI component rendering;

determining, among the nodes of a document object model DOM corresponding to the first visual mockup, a first node corresponding to each UI block in the at least one UI block;

inputting an image corresponding to each first node into a set classification model to obtain a UI component type corresponding to the first node outputted by the set classification model, wherein the set classification model is used for determining a UI component type corresponding to an inputted image.

In the above solution, determining, among the nodes of a document object model (DOM) corresponding to the first visual mockup, a first node corresponding to each UI block in the at least one UI block includes:

traversing the nodes of a document object model DOM corresponding to the first visual mockup;

when a region overlap rate is greater than a first set threshold, determining a node corresponding to the region overlap rate as a first node corresponding to the first UI block, wherein

the region overlap rate represents the overlap rate between a second image and the first UI block, and the second image is obtained by cropping the first visual mockup according to the node information of the node.

DESCRIPTION OF THE DRAWINGS

FIG. 1 is a schematic flowchart where a component identification method according to one or more of the embodiments of the present disclosure is implemented;

FIG. 2 is a schematic diagram where UI blocks in an image according to one or more of the embodiments of the present disclosure are
identified;

FIG. 3 is a schematic flowchart where determining of a node according to one or more of the embodiments of the present disclosure is implemented;

FIG. 4 is a schematic diagram where the UI block identification results according to one or more of the embodiments of the present disclosure are shown;

FIG. 5 is a schematic flowchart where page segmentation according to one or more of the embodiments of the present disclosure is implemented;

FIG. 6 is a schematic flowchart where component identification according to one or more of the embodiments of the present disclosure is implemented;

FIG. 7 is a schematic diagram where a page of the component identification according to one or more of the embodiments of the present disclosure is shown;

FIG. 8 is a flowchart where model training according to one or more of the embodiments of the present disclosure is implemented;

FIG. 9 is a schematic diagram where the structure of a component identification apparatus according to one or more of the embodiments of the present disclosure is shown;

FIG. 10 is a schematic diagram where the structure of an electronic device according to one or more of the embodiments of the present disclosure is shown.

DESCRIPTION OF THE EMBODIMENTS

With the emergence of low-code and no-code platforms, a conversion from a visual mockup to application front-end codes can be realized with little or no coding. A process of generating UI codes from a visual mockup comprises inputting structured visual mockup data to obtain UI codes through the steps of layer information parsing, layout, component replacement, semantization, code generation and so on. Component replacement is a key step of generating UI codes from a visual mockup, including: developing common visual modules into components; determining, in the process of generating UI codes from a visual mockup, parts in the visual mockup that are consistent with the set visual modules; and replacing with codes of the corresponding components. A prerequisite for component replacement is to specify the parts in the visual mockup that can be replaced with components.

At present, in a front-end business development process, in order to generate