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OpenCV: Simple Effectiveness

OpenCV is an open source computer vision library, a collection of software fragments upon which more complex software can be written. The OpenCV website is dedicated to furthering the development and usage of a free software library that is to create programs in which a computer analyzes video and still image information in automation, robotics, and various research applications in academia. The library and its documentation are developed and maintained by a team of variously involved volunteers, and the software itself is free for use and distribution in commercial applications. As such, the community that has resulted from the creation and use of the library has given rise to a unique set of values, goals, and writing conventions that are reflected in the content of the library's website.

On initial inspection, the website appears very simple and clean, even boring to an extent. On the top of the page are the logo, navigation bar, and search field that are typical of most sites. A mission statement accompanies a directory to the site's most frequently accessed sections immediately below. Beyond them, two rows of links highlight news and various tutorials respectively. No section is given prominence, except by the occasional deviation from the coloring scheme. The page contains no advertisements or clear links to partner pages and institutions. Everything about the site is presented in a straightforward, uncomplicated way. Although ease of use is not clearly the top priority of the layout, nothing exists on the site to prevent a user from navigating effectively to an objective. Through its simplicity and lack of advertisements, the site conveys a sense of honesty, and makes clear that it exists to better the understanding of computer vision, not to sell a product.

If vertical position can be taken as an indicator of importance, and ignoring the mandatory navigation and search bars, the site seems to put importance on two elements in particular. On second inspection, these elements are also the ones distinguished by an eye-catching red font. The first is a brief introduction to the library, listing its supported platforms and features. Fairly technical terms like “multi-core processing” and “hardware acceleration” could confuse a lay audience, but effectively and concisely communicate the uses and capabilities to programmers. The second is a “donate” button located immediately under the search bar. To a programming audience, this is used indicate that the library is free and supported by volunteers and donors. However, to an outside audience, it could potentially cause confusion, as this model of software development is fairly unusual among consumer products.

Especially notable is the lack of visuals to accompany the text. For a computer vision library, the addition of images could be used to greatly clarify the functions and intended uses of the library. From an inside perspective, this can be attributed to the project’s free availability and lack of competition from other libraries. Additions such as graphics would be more typical of a website promoting a product for sale. Since the organization isn’t paid for the use of its library, and since it faces no comparable libraries exist, the page has no real need to promote the library. Although the lack of visuals may also serve to dissuade some users less versed in the use of machine vision algorithms

Below that is a news section with various articles listed horizontally across the page. The section seems to be updated fairly frequently, with around two weeks between updates. The links are to internal web pages, rather than articles around the internet. The site is focused on only delivering news pertaining directly, to the updates and releases of the library. There is generally very little mention of upcoming features, and no information on other developments in computer vision. The page remains very focused on its goal to provide information to potential users of the library, foregoing information that would be

interesting to computer vision programmers in general. Although the site is central to many programmers, it maintains the humble goal of merely providing the best possible library for programmers.

Finally, on the bottom of the homepage is a similar section titled “Latest Tutorials” providing links to pages written by community members on how to use the software. There are two tutorials posted titled “High Dynamic Range Imaging” and “Introduction to OpenCV Development with Clojure”. They represent a fairly niche image processing technique and compatibility with a rarely used programming language. These two topics in particular illustrate topics that would not be of interest to even the average user of the library. Instead, they serve to illustrate the depth of available tutorials, and convince programmers that whatever need they have for documentation is likely to be satisfied.

The website serves a wide variety of different visitors, although it seems to be tailored mostly to programmers who wish to utilize the library in a project, rather than those who wish to contribute to the library. This is probably to be expected though, as they would likely make a majority of site visitors. To these visitors, the most pertinent information are the links to the actual library, which must be downloaded to be used, and the documentation of how to use it. The download link is readily available on the home page, with all supported platforms listed a separate links. The documentation and tutorials however, are buried in the navigation bar at the top of the page, and given no indication that they would be of particular importance to a visitor.

The navigation bar at the top of the page includes links to sections titled “About”, “Downloads”, “Documentation”, “Platforms”, “Support”, and “Contribute”. Despite being billed equally on the top of the page, these links actually vary quite a bit in their content total. Most links direct to singleton web pages that provide the information indicated by their title. The “Documentation” link, however, is a link to a page that provides access to most of the content of the site. Here, there are links to reference manuals, tutorials, a Youtube channel, and other material that could aid users.

Overall, the website is highly functional, with very little to distract a user from the intended use, although navigating the page could also prove difficult for users unfamiliar with the format of similar sites. By including very little in extraneous detail, the site promotes the discourse community's principles of simplicity and usability to those within the field, and honest communication between users and developers.

Works Cited:

"OpenCV | OpenCV." OpenCV | OpenCV. Itseez, 9 Feb. 2016. Web. 11 Feb. 2016.