



CALIFORNIA STATE SCIENCE FAIR 2011 PROJECT SUMMARY

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Project Title Net the Net	
<p style="text-align: center;">Abstract</p> <p>Objectives/Goals Many internet surfers experience frustration and aggravation while using an internet search engine, from the lack of relevant result information or the numerous results that rank over ten million. Also the surfer may want to search for images, but the image search engines, today, search images by the file name rather than the visual content of the image. The objective of my project is to determine whether search tips could be used on search engines to reduce the number of search results and get exactly the information the user wants. Also I wanted to know if, by using internet search tips, the user could get the same information and same number of hits from each search engine. When searching for images, I hypothesized that an algorithm could be written which searches images by their image content, rather than their file name.</p> <p>Methods/Materials I developed 29 internet search tips (they consist of Boolean logic, special characters, and wildcards) which I used on four different search engines (Google, Bing, Yahoo, AOL). My control was each of my search engines without search tips. I recorded my data in a chart, and later converted it into graphs. For images, I developed an algorithm which uses color, location, and correlation of pixels in an image to determine if two images are visually analogous or not.</p> <p>Results My graph showed that when using search tips, the number of search results in the search decreased a great deal. During the time I was executing my search tips on the various terms I learned that the information coming from each search engine was not the same. Also, the number of search hits was not the same. I also designed an algorithm which finds images that are visually similar, rather than having similarity of file name.</p> <p>Conclusions/Discussion I concluded that internet search tips could reduce the number of search results and give the user the information they wanted. However, the user does not get about the same number of hits or about the same type of information from each search engine. This makes my hypothesis partially correct. I also concluded that an algorithm could be written to give the user images that are visually similar to their search. My project has a very practical application. Every day, millions of people all over the world use a search engine. My project will help them get the information they are looking for without getting millions of results back.</p>	
Summary Statement This project determines if internet search tips could be used to reduce the number of search results and bring more relevant information to the search and explores an image searching algorithm that searches by the visual similarity of images.	
Help Received My parents helped me organized the science board.	