



Empirical Investigation of Visual Aesthetics and Accessibility (EIVAA)

Project Description and Implementation Status
November, 2012

Grace Mbipom



Description

- Implementation is based on the EIVAA project available at <http://wel.cs.manchester.ac.uk/research/eivaa/>.
- The EIVAA tool represents a first step towards providing proxy accessibility status information regarding a Web page by examining its visual quality.
- The statistical models on which the EIVAA tool is based were generated from several user studies conducted. The results from the tool mimic those of its human counterparts.

Example I

The screenshot displays the Eclipse IDE environment. The main editor shows the `Aesthetics.java` file with the following code:

```

while (m3.find()) {
    String src3 = (src2.substring(m3.start(), m3.end()));
    wordcount++;
}

WC = wordcount;
WC = WC/10;
}
}

//Print out selected features, compute regression functions and report
/**
 * @param args
 */
public static void main(String args[]){
    String url="http://www.moneysavingexpert.com/";
    Aesthetics a = new Aesthetics (url);
    System.out.println("===== TEST REPORT ==");
    System.out.println("Analysis for "+url+" : ");
    System.out.println(" ");
}

```

The console output shows the aesthetic scores for the MoneySavingExpert.com website:

```

<terminated> Aesthetics [Java Application] C:\Program Files\Java\jre7\bin\javaw.exe (21 Nov 2012 14:20:05)
===== AESTHETICS SCORES =====
Clean: 2.6689999999999999
Pleasing: 3.258
Fascinating: 3.592
Creative: 3.5349999999999997
Aesthetic: 3.4520000000000004

===== ACCESSIBILITY =====
Likely low accessibility

```

The background image shows the MoneySavingExpert.com website, which is the subject of the analysis. The website features various financial advice sections, including 'Cards Loans', 'Reclaim £1,000s', 'Shopping', 'Deals Vouchers', 'Utilities Phones', 'Banking Saving', 'Travel Motoring', 'Insurance', 'Mortgages Homes', and 'Income Family'. It also includes a 'Free MoneySaving Email' sign-up form and a 'LATEST NEWS' section.

Example I shows EIVAA tool results for the MoneySavingExpert.com Web page shown. The tool first analyses the aesthetic quality of the Web page, and then makes a proxy accessibility status prediction based on its appearance represented by the aesthetic scores.

Example II



The screenshot displays the Eclipse IDE with the following components:

- Package Explorer:** Shows the project structure for 'Eivaa' with sub-packages like 'org.eclipse.actf.examples.adesigner' and 'org.eclipse.actf.examples.simplevisual'.
- Code Editor:** Shows the source code for 'Aesthetics.java'. The code includes a loop for finding words, a calculation for 'wordcount', and a 'main' method that fetches the Google Canada page and prints analysis results.
- Console:** Displays the output of the Java application:


```
<terminated> Aesthetics [Java Application] C:\Program Files\Java\jre7\bin\javaw.exe (21 Nov 2012 14:
===== AESTHETICS SCORES =====
Clean: 5.629
Pleasing: 5.114
Fascinating: 4.66
Creative: 4.6869999999999999
Aesthetic: 4.9280000000000001

===== ACCESSIBILITY =====
Likely high accessibility
```
- Browser:** Shows the Google Canada homepage, which is the target of the analysis.

Example II shows EIVAA results for another Web page – Google Canada.



Implementation Status

- Technical report write-up
- Fixing minor bugs
- Submission to ACTF after CVS to Git migration
- Currently being extended in another project being carried out by WEL researchers. For more information please visit <http://wel.cs.manchester.ac.uk/>

Thank you