# Anexo I

Tablas donde se han almacenado todos los valores de los descriptores calculados, para obtener los prototipos de cada especie, con los que se comparan las nuevas imágenes adquiridas por la aplicación. Cada tabla irá acompañada de las imágenes de las que se han extraído los datos.

|  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Algarrobo** | | | | | | | | | | |
| **Momentos hu** | **Imagen 1** | **Imagen 2** | **Imagen 3** | **Imagen 4** | **Imagen 5** | **Imagen 6** |  | **Mediana** | **s** | **Cv** |
| h1 | 0,17728 | 0,17785 | 0,17984 | 0,17706 | 0,17491 | 0,17785 | **0,17746** | **0,17785** | **0,00159** | **0,00898** |
| h2 | 0,00577 | 0,00591 | 0,00613 | 0,00518 | 0,00475 | 0,00591 | **0,00561** | **0,00591** | **0,00053** | **0,09455** |
| h3 | 7,26E-05 | 8,99E-05 | 2,38E-04 | 2,18E-04 | 1,08E-04 | 8,99E-05 | **0,00014** | **0,00009** | **0,00007** | **0,53231** |
| h4 | 6,36E-06 | 7,71E-06 | 3,08E-05 | 2,22E-05 | 1,08E-05 | 7,71E-06 | **1,4242E-05** | **9,0057E-06** | **9,9484E-06** | **0,69850** |
| h5 | 1,25E-10 | 1,82E-10 | 2,63E-09 | 1,52E-09 | 3,66E-10 | 1,82E-10 | **8,3467E-10** | **1,9948E-10** | **1,0265E-09** | **1,22987** |
| h6 | 3,72E-07 | 4,28E-07 | 2,41E-06 | 1,50E-06 | 7,38E-07 | 4,28E-07 | **9,7872E-07** | **6,2097E-07** | **8,1781E-07** | **0,83559** |
| h7 | -5,42E-11 | -8,89E-11 | -5,33E-11 | -2,36E-10 | -1,94E-11 | -8,89E-11 | **-9,0119E-11** | **-1,9389E-11** | **7,6033E-11** | **0,84370** |
| R/A | 0,61278 | 0,61733 | 0,61629 | 0,63359 | 0,64197 | 0,69150 | **0,63558** | **0,63359** | **0,02965** | **0,04666** |
| Compacidad | 0,66176 | 0,67887 | 0,69694 | 0,66568 | 0,70196 | 0,70351 | **0,68479** | **0,67887** | **0,01857** | **0,02711** |

Tabla 1: Descriptores del algarrobo y su media, mediana, desviación típica y coeficiente de variación.

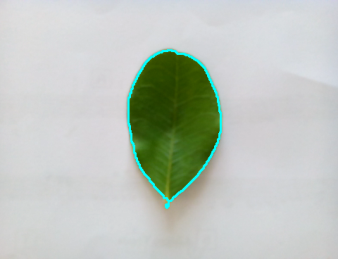
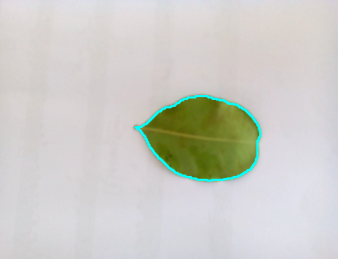


Imagen 1: De izquierda a derecha, de la imagen 1 a la imagen 6 correspondientes a las imágenes utilizadas para el cálculo de los descriptores de la Tabla 1.

|  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Olivo** | | | | | | | | | | |
| **Momentos** | **Imagen 1** | **Imagen 2** | **Imagen 3** | **Imagen 4** | **Imagen 5** | **Imagen 6** |  | **Mediana** | **s** | **Cv** |
| h1 | 0,506748 | 0,495325 | 0,569418 | 0,429431 | 0,457672 | 0,540664 | **0,499876** | **0,501036** | **0,051597** | **0,103220** |
| h2 | 0,229442 | 0,218175 | 0,294987 | 0,157324 | 0,181417 | 0,264555 | **0,224317** | **0,223808** | **0,051002** | **0,227364** |
| h3 | 0,008862 | 0,006752 | 0,009918 | 0,005061 | 0,008446 | 0,006622 | **0,007610** | **0,007599** | **0,001778** | **0,233581** |
| h4 | 0,007589 | 0,005735 | 0,005725 | 0,004028 | 0,006516 | 0,004488 | **0,005680** | **0,005730** | **0,001304** | **0,229498** |
| h5 | 0,000062 | 0,000036 | 0,000043 | 0,000018 | 0,000048 | 0,000024 | **0,000039** | **0,000039** | **0,000016** | **0,417208** |
| h6 | 0,003629 | 0,002676 | 0,002655 | 0,001586 | 0,002700 | 0,002130 | **0,002563** | **0,002666** | **0,000681** | **0,265749** |
| h7 | 0,000000 | 0,000000 | 0,000006 | 0,000000 | 0,000001 | -0,000002 | **0,000001** | **0,000000** | **0,000003** | **3,197984** |
| R/A | 0,159137 | 0,156387 | 0,136523 | 0,191459 | 0,178733 | 0,149099 | **0,161890** | **0,157762** | **0,020015** | **0,123633** |
| Compacidad | 0,258069 | 0,241048 | 0,208971 | 0,308454 | 0,269370 | 0,256720 | **0,257106** | **0,257395** | **0,032750** | **0,127380** |

Tabla 2: Descriptores del olivo, y su media, mediana, desviación típica y coeficiente de variación.

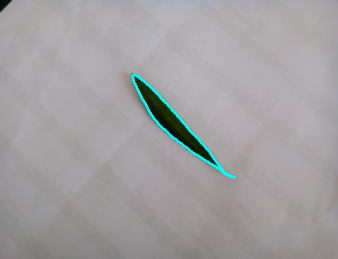
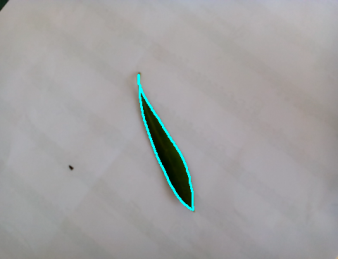
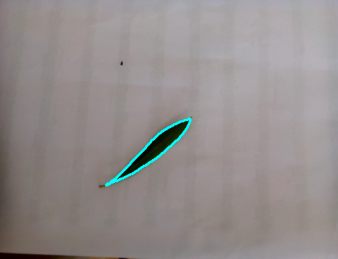
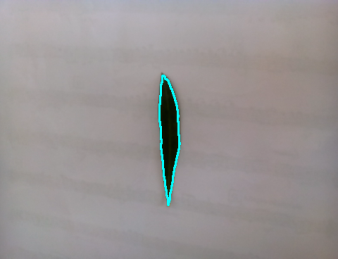


Imagen 2: De izquierda a derecha, de la imagen 1 a la imagen 6 correspondientes a las imágenes utilizadas para el cálculo de los descriptores de la Tabla 2

|  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Naranjo** | | | | | | | | | | | |  |
| **Momentos** | **Imagen 1** | **Imagen 2** | **Imagen 3** | **Imagen 4** | **Imagen 5** | **Imagen 6** | **Imagen 7** | **Imagen 8** |  | **Mediana** | **s** | **Cv** |
| h1 | 0,196413 | 0,201054 | 0,215778 | 0,216408 | 0,187316 | 0,221120 | 0,192622 | 0,220359 | **0,206384** | **0,208416** | **0,013533** | **0,065573** |
| h2 | 0,012796 | 0,014565 | 0,020521 | 0,021016 | 0,009490 | 0,022713 | 0,011502 | 0,022668 | **0,016909** | **0,017543** | **0,005391** | **0,318841** |
| h3 | 9,63E-05 | 9,06E-05 | 4,72E-05 | 2,44E-05 | 1,75E-05 | 1,32E-04 | 8,57E-06 | 4,60E-05 | **5,7763E-05** | **4,6597E-05** | **4,3805E-05** | **0,758359** |
| h4 | 1,95E-10 | 4,67E-06 | 1,15E-05 | 5,34E-06 | 2,67E-06 | 3,40E-05 | 8,64E-07 | 4,29E-06 | **7,9096E-06** | **4,4777E-06** | **1,10966E-05** | **1,402938** |
| h5 | -2,81E-08 | -8,52E-11 | 2,56E-10 | 5,88E-11 | 1,80E-11 | 2,22E-09 | 1,34E-12 | 1,53E-11 | **-3,2052E-09** | **1,6665E-11** | **1,00984E-08** | **3,150627** |
| h6 | 6,13E-11 | -5,20E-07 | 1,30E-06 | 6,88E-07 | 2,45E-07 | 4,14E-06 | 1,27E-08 | -2,01E-08 | **7,3104E-07** | **1,2894E-07** | **1,48083E-06** | **2,025646** |
| h7 | 7,57E-06 | -4,42E-11 | -7,53E-11 | -1,59E-11 | 2,78E-12 | -4,89E-10 | 1,93E-12 | 5,83E-11 | **9,4586E-07** | **-6,9656E-12** | **2,67551E-06** | **2,828667** |
| R/A | 0,518039 | 0,487861 | 0,427206 | 0,441764 | 0,557363 | 0,426592 | 0,535032 | 0,432943 | **0,478350** | **0,464812** | **0,053206** | **0,111229** |
| Compacidad | 1,451082 | 1,684974 | 1,984649 | 1,742131 | 1,525520 | 1,864941 | 1,452952 | 1,720216 | **1,678308** | **1,702595** | **0,192840** | **0,114902** |

Tabla 3 Descriptores del naranjo y su media, mediana, desviación típica y coeficiente de variación.



Imagen 3: De izquierda a derecha, de la imagen 1 a la imagen 8 correspondientes a las imágenes utilizadas para el cálculo de los descriptores de la Tabla 3

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Higuera** | | | | | | | | | | | | |  |  |  |
| **Momen** | **Imagen 1** | **Imagen 2** | **Imagen 3** | **Imagen 4** | **Imagen 5** | **Imagen 6** | **Imagen 7** | **Imagen 8** |  | **Mediana** | **s** | **Cv** |
| **h1** | 0,17796 | 0,18343 | 0,18316 | 0,18278 | 0,18040 | 0,17970 | 0,18320 | 0,18326 | **0,18174** | **0,18283** | **0,00209** | **0,01151** |
| **h2** | 1,90E-04 | 6,20E-04 | 1,56E-04 | 2,74E-04 | 4,37E-04 | 3,83E-04 | 7,46E-04 | 6,45E-04 | **0,00043** | **0,00044** | **0,00022** | **0,51221** |
| **h3** | 1,05E-04 | 1,52E-04 | 1,26E-04 | 1,23E-04 | 1,38E-04 | 1,57E-04 | 1,13E-04 | 9,35E-05 | **0,00013** | **0,00013** | **2,233E-05** | **0,17723** |
| **h4** | 8,80E-06 | 2,48E-05 | 3,67E-05 | 4,07E-05 | 2,00E-05 | 1,79E-05 | 2,62E-05 | 2,17E-05 | **2,4598E-05** | **2,2205E-05** | **1,0218E-05** | **0,41540** |
| **h5** | 2,50E-10 | 1,52E-09 | 2,48E-09 | 2,88E-09 | 9,98E-10 | 9,19E-10 | 1,43E-09 | 9,70E-10 | **1,4313E-09** | **1,3206E-09** | **8,6725E-10** | **0,60592** |
| **h6** | 1,00E-07 | 6,17E-07 | 4,19E-07 | 6,24E-07 | 3,93E-07 | 3,33E-07 | 7,10E-07 | 5,52E-07 | **4,6847E-07** | **4,8518E-07** | **1,9768E-07** | **0,42197** |
| **h7** | 9,35E-11 | 6,50E-11 | -2,03E-10 | -1,74E-11 | 3,25E-10 | -2,38E-10 | 1,99E-11 | 1,38E-10 | **2,2916E-11** | **1,166E-12** | **1,8208E-10** | **7,94538** |
| **R/A** | 0,92044 | 0,84805 | 0,90669 | 0,87326 | 0,86067 | 0,86067 | 0,83343 | 0,84361 | **0,86835** | **0,85880** | **0,03063** | **0,03528** |
| **Compac** | 3,20484 | 3,84002 | 3,73080 | 3,53787 | 3,18594 | 3,12025 | 3,89581 | 3,91924 | **3,55435** | **3,91924** | **0,33997** | **0,09565** |

Tabla 4: Descriptores de la higuera, y su media, mediana, desviación típica y coeficiente de variación.

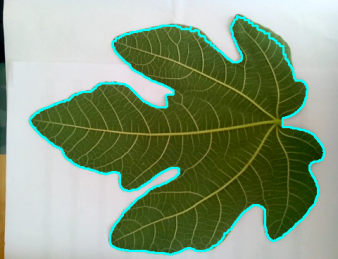
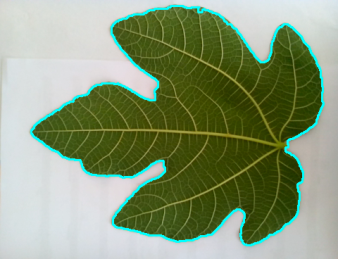
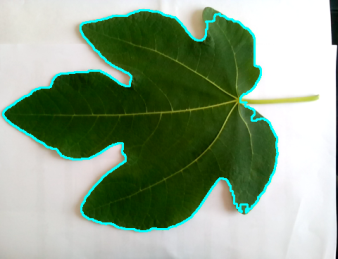
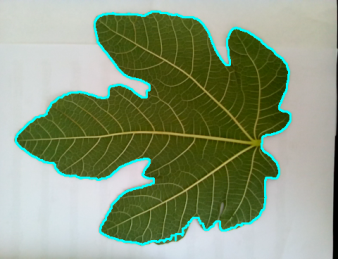
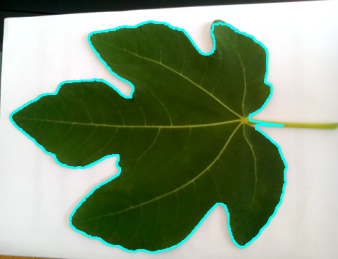


Imagen 4: De izquierda a derecha, de la imagen 1 a la imagen 8 correspondientes a las imágenes utilizadas para el cálculo de los descriptores de la Tabla 4

|  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Níspero** | | | | | | | | | | |  |
| **Momentos** | **Imagen 1** | **Imagen 2** | **Imagen 3** | **Imagen 4** | **Imagen 5** | **Imagen 6** | **Imagen 7** |  | **Mediana** | **s** | **Cv** |
| **h1** | 0,24889 | 0,25687 | 0,32716 | 0,28021 | 0,35915 | 0,25448 | 0,29884 | **0,28937** | **0,28021** | **0,04160** | **0,14375** |
| **h2** | 0,03581 | 0,03967 | 0,08010 | 0,05259 | 0,10294 | 0,03863 | 0,06208 | **0,05883** | **0,05259** | **0,02501** | **0,42508** |
| **h3** | 0,00044 | 0,00064 | 0,00151 | 0,00033 | 0,00093 | 0,00047 | 0,00126 | **0,00080** | **0,00064** | **0,00045** | **0,56275** |
| **h4** | 2,1E-04 | 2,7E-04 | 8,6E-04 | 9,0E-05 | 6,6E-04 | 2,0E-04 | 8,6E-04 | **0,00045** | **0,00027** | **0,00033** | **0,73655** |
| **h5** | 6,5E-08 | 1,1E-07 | 9,8E-07 | 1,4E-08 | 5,1E-07 | 6,3E-08 | 8,9E-07 | **3,8E-07** | **1,1E-07** | **4,2E-07** | **1,10927** |
| **h6** | 4,0E-05 | 4,9E-05 | 2,3E-04 | 1,3E-05 | 2,1E-04 | 4,0E-05 | 2,1E-04 | **1,1E-04** | **4,9E-05** | **9,8E-05** | **0,86460** |
| **h7** | -6,3E-10 | 1,3E-08 | 5,7E-08 | 7,2E-09 | -7,0E-09 | 1,9E-10 | -4,1E-08 | **4,1E-09** | **1,9E-10** | **2,9E-08** | **7,07298** |
| **R/A** | 0,35690 | 0,34533 | 0,26463 | 0,30739 | 0,23454 | 0,34125 | 0,29041 | **0,30578** | **0,30739** | **0,04554** | **0,14893** |
| **Compacidad** | 2,14821 | 2,02226 | 2,46855 | 2,01441 | 2,75439 | 2,13368 | 2,51635 | **2,29398** | **2,14821** | **0,28602** | **0,12468** |

Tabla 5: Descriptores del níspero y la media, mediana, desviación típica y coeficiente de variación de éste.

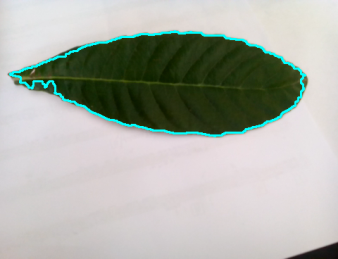


Imagen 5: De izquierda a derecha, de la imagen 1 a la imagen 7 correspondientes a las imágenes utilizadas para el cálculo de los descriptores de la Tabla 5.

|  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Granado** | | | | | | | | | | |  |
| **Momentos** | **Imagen 1** | **Imagen 2** | **Imagen 3** | **Imagen 4** | **Imagen 5** | **Imagen 6** | **Imagen 7** |  | **Mediana** | **s** | **Cv** |
| **h1** | 0,23229 | 0,22368 | 0,17477 | 0,17639 | 0,17899 | 0,20380 | 0,19166 | **0,19987** | **0,19773** | **0,02275** | **0,11384** |
| **h2** | 0,02682 | 0,02361 | 0,00502 | 0,00556 | 0,00654 | 0,01576 | 0,01106 | **0,01446** | **0,01341** | **0,00868** | **0,60033** |
| **h3** | 0,00106 | 0,00054 | 0,00002 | 0,00004 | 0,00002 | 0,00001 | 0,00007 | **0,00025** | **0,00006** | **0,00038** | **1,51475** |
| **h4** | 4,36E-04 | 1,97E-04 | 9,94E-07 | 1,48E-06 | 2,06E-06 | 4,08E-06 | 1,19E-05 | **9,11E-05** | **7,97E-06** | **1,55E-04** | **1,70044** |
| **h5** | 2,96E-07 | 6,46E-08 | 2,81E-12 | -1,76E-12 | 1,27E-11 | 2,87E-11 | 3,48E-10 | **4,63E-08** | **1,88E-10** | **1,03E-07** | **2,22951** |
| **h6** | 7,04E-05 | 3,01E-05 | 2,36E-08 | -3,90E-08 | 1,64E-07 | 4,91E-07 | 1,23E-06 | **1,42E-05** | **8,61E-07** | **2,50E-05** | **1,76475** |
| **h7** | 1,58E-08 | 2,29E-09 | 3,00E-12 | -1,12E-11 | -9,05E-13 | -4,24E-12 | 3,90E-11 | **2,32E-09** | **2,10E-11** | **5,49E-09** | **2,37024** |
| **R/A** | 0,37056 | 0,41382 | 0,63710 | 0,63657 | 0,61724 | 0,47312 | 0,54460 | **0,51541** | **0,50886** | **0,10760** | **0,20877** |
| **Compacidad** | 2,06095 | 1,73235 | 1,40160 | 1,31070 | 1,30325 | 1,63686 | 1,40458 | **1,56849** | **1,52072** | **0,26247** | **0,16734** |

Tabla 6: Descriptores del granado y la media, mediana, desviación típica y coeficiente de variación de éste.

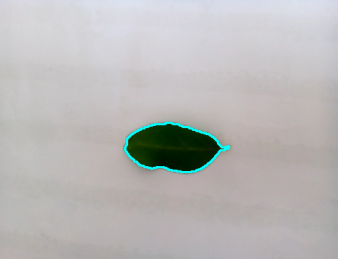
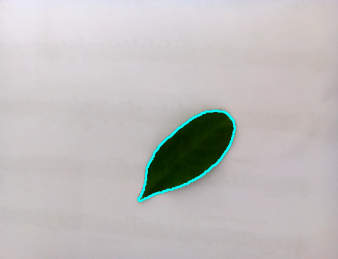
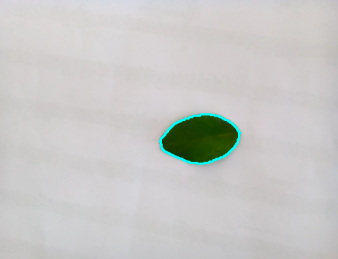
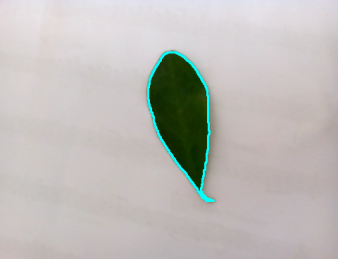


Imagen 6: De izquierda a derecha, de la imagen 1 a la imagen 7 correspondientes a las imágenes utilizadas para el cálculo de los descriptores de la Tabla 6