

Feature Name	Description
Value $_{x=[AI3],y=[A3]}$	Phenotype value at a particular pair of $[AI3],[A3]$ input values.
Integral	Sum of all values over the image.
Max	Max value over the image.
Min	Min value over the image.
Mean	Mean value over the image.
σ	Standard deviation over the image.
Entropy	Entropy over the image.
Contrast	See <code>graycoprops()</code> , Matlab (Natick, MA)
Correlation	See <code>graycoprops()</code> , Matlab (Natick, MA)
Energy	See <code>graycoprops()</code> , Matlab (Natick, MA)
Homogeneity	See <code>graycoprops()</code> , Matlab (Natick, MA)
Area	See <code>regionprops()</code> , Matlab (Natick, MA)
Centriod	See <code>regionprops()</code> , Matlab (Natick, MA)
Bounding Box	See <code>regionprops()</code> , Matlab (Natick, MA)
Major Axis Length	See <code>regionprops()</code> , Matlab (Natick, MA)
Minor Axis Length	See <code>regionprops()</code> , Matlab (Natick, MA)
Eccentricity	See <code>regionprops()</code> , Matlab (Natick, MA)
Orientation	See <code>regionprops()</code> , Matlab (Natick, MA)
Convex Area	See <code>regionprops()</code> , Matlab (Natick, MA)
Filled Area	See <code>regionprops()</code> , Matlab (Natick, MA)
Euler Number	See <code>regionprops()</code> , Matlab (Natick, MA)
Equivalent Diameter	See <code>regionprops()</code> , Matlab (Natick, MA)
Solidity	See <code>regionprops()</code> , Matlab (Natick, MA)
Extent	See <code>regionprops()</code> , Matlab (Natick, MA)
Perimeter	See <code>regionprops()</code> , Matlab (Natick, MA)
Pattern Matching	Compare two-input function to mean functions calculated for every S/N (binned by integer) in a training set. Record S/N at which pattern most closely fits according to least-squares.
Pattern Matching $_{i=S/N}$	Compare image to mean function calculated for S/N= i (binned by integer) in a training set. Record the sum-of-squares difference calculated over the two-input space.
Pattern Matching $_{Norm}$	Same as “Pattern Matching,” but images (and the averages to which they are compared) are mean-centered and variance-normalized.

Table S6: Features used to analyze throttle behavior. These features were measured for each throttle phenotype (see Table S5), where “image” refers to the observed phenotype as a response to the two inputs, $A3$ and $AI3$ (see Figure S14).