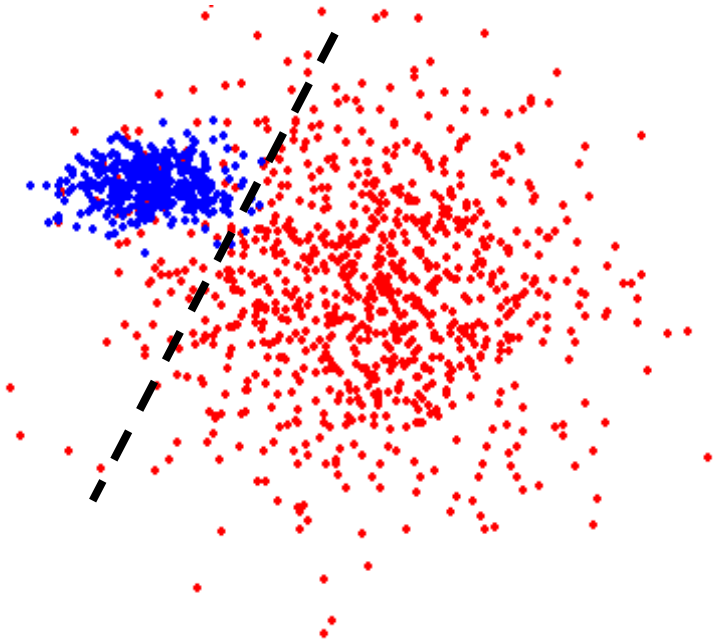
Linear discriminant function

- To segment image with n components f_i, $i=1,2,\ldots,n$ into two classes, perform test

$$\sum_i w_i f_i + w_0 \geq 0 \quad ?$$



- Categories are separated by hyperplane in n-space
- Numerous techniques to determine weights w_i, $i=0,1,2,\ldots,n$, see, e.g., *[Duda, Hart, Stork, 2001]*
- Can be extended to the intersection of several linear discrimant functions
- Can be extended to multiple classes