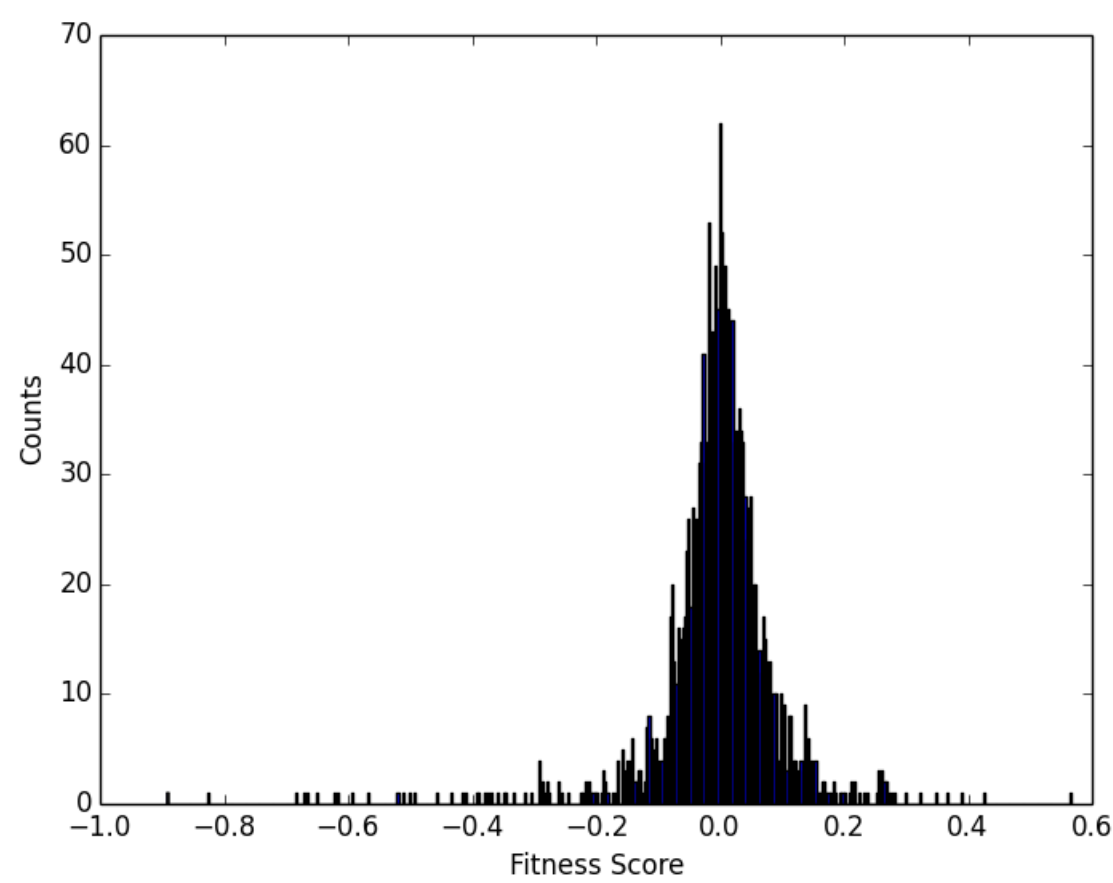# Reproducibility - Normality

Tuesday, November 11, 2014   11:50 AM

Is it normal?

Took barcode fitness scores from UbCELSS Day 1 and Day 2, made a histogram of WT barcode fitnesses and used distribution_check.py to test for best fit distributions.
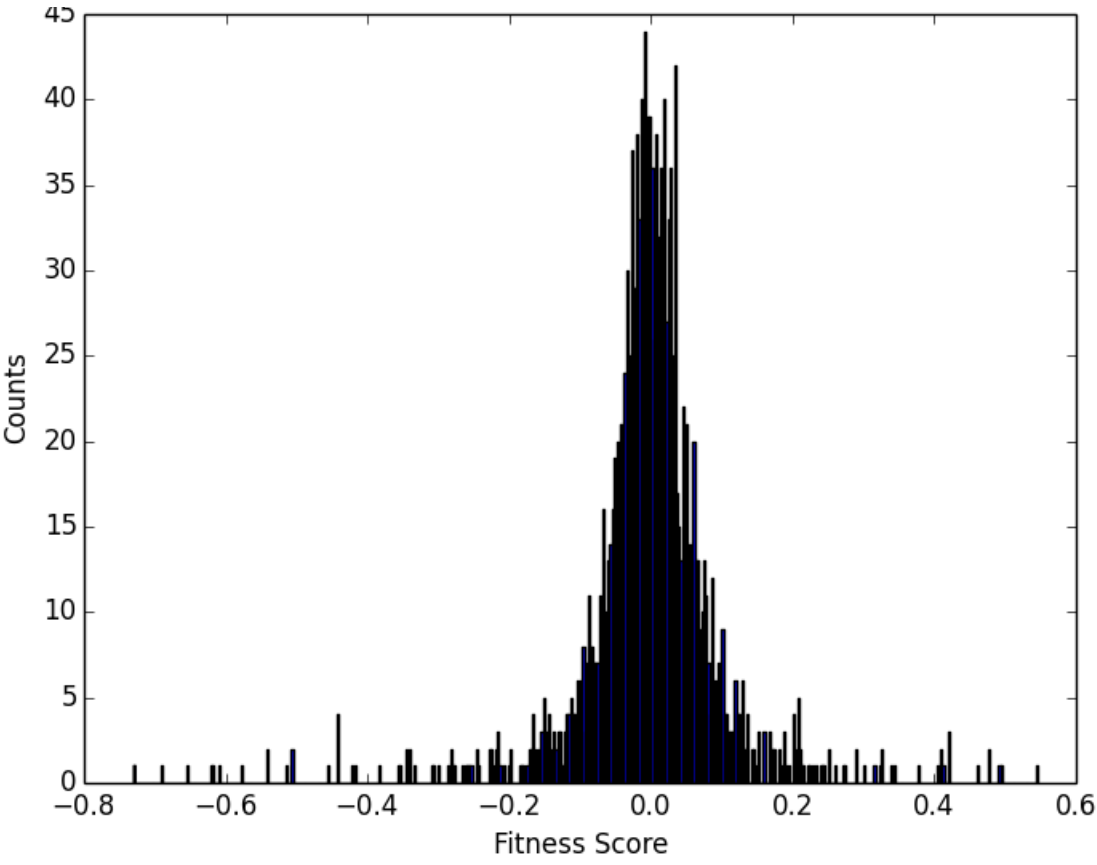
It appears that wt distributions fit a student t distribution or a non-centered t-distribution.

Day 1

name	neg log p KS-test	neg log likelihood	# parameters
cauchy	6.56034488528	-2261.78020573	2
dgamma	13.1435472201	-2271.51562798	3
dweibull	14.2887367343	-2285.91717391	3
genlogistic	16.7778153255	-2183.51842943	3
hypsecant	7.50076117597	-2209.56275334	2
johnsonsu	0.441697504758	-2350.07526297	4
laplace	3.95003773227	-2267.26338999	2
logistic	13.791581391	-2138.13228445	2
nct	0.0491416776833	-2349.86901249	4
t	0.083981776217	-2348.670043	3

Day 2

```
name            neg log p KS-test       neg log likelihood      # parameters
cauchy          3.13878793638           -1962.33407104                     2
dgamma          5.2495976808            -1959.13415169                     3
dweibull        6.81688623827           -inf                               3
fisk            18.7993164045           -1803.77699487                     3
genlogistic     21.0948779396           -1824.47141952                     3
hypsecant       12.5346545003           -1878.03609516                     2
johnsonsu       0.0183694705567         -2027.80829667                     4
laplace         5.36407100416           -1940.82321664                     2
logistic        19.3285239049           -1803.80280762                     2
loglaplace      6.96224690269           -1939.93339259                     3
nct             0.00550704644085        -2025.19715859                     4
t               0.0653812023274         -2024.84499692                     3
```