alt\_input.py

- read\_data\_only(dataFile)

- reads in a dataFile, returns a tableau

- augment\_sigma\_k(mt, sigma, k):

- reads in a megatableau, an alphabet, and a maximum string length, doesn’t return anything

- violations(constraint, word)

- reads in a constraint string and a word string, returns a positive integer

- apply\_mark\_list(mt, markList)

- reads in a megatableau and a list of constraint strings, returns a megatableau

calc\_weights.py

- user can run calc\_weights from the shell or via importing it

- learned\_weights(mt)

- reads in a megatableau, returns weights?

- learn\_parabola(c2, c1, c0)

- reads in constants (floats?) for the coefficient of a parabola and returns

a minimum value (float?) of the parabola

- learn\_hyperparabola(c2\_c1\_tuples, c0)

- reads in tuples of constants (floats?) for the coefficient of a parabola and returns the hyperparabola minimum?

data\_prob.py

- maxent\_value(weights, tableau, ur, sr)

- reads in a list of nonpositive weights (floats), a megatableau, and a pair of strings, returns a “real” number

- z\_score(tableau, ur)

- reads in a tableau and a string, returns a “real” number

- **presumes that you’ve called update\_maxent\_values**

- update\_maxent\_values(weights, tableau)

- reads in a list of nonpositive weights (floats) and a megatableau, doesn’t return anything

- calls maxent\_value

- neg\_log\_probability\_with\_gradient(weights, tableau)

- reads in a list of nonpositive weights (floats) and a megatableau, returns a nonpositive float and a gradient (list of functions?)

- calls update\_maxent\_values and z\_score

- neg\_log\_probability(weights, tableau)

- reads in a list of nonpositive weights (floats) and a megatableau, returns a nonpositive float

- calls update\_maxent\_values and z\_score

- probability(weights, tableau)

- reads in a list of nonpositive weights (floats) and a megatableau, returns a nonnegative float

- calls neg\_log\_probability

gen.py

- sigma\_k(alphabet, k)

- reads in an alphabet, a maximum string length, returns alphabet\* up to length k

- calls a helper function

- sigma\_0k(alphabet, k)

- reads in an alphabet, a maximum string length, returns alphabet\* up to length k

- calls a helper function

- sigma\_1k(alphabet, k)

- reads in an alphabet, a maximum string length, returns alphabet+ up to length k

- calls sigma\_0k

megatableau.py

- defines an object, MegaTableau

- \_\_init\_\_(self, megt\_file=None)

- initiates object

- read\_megt\_file(self, megt\_file)

- reads in a file containing tab-delimited “tableau”, doesn’t return anything

- read\_weights\_file(self, weights\_file)

- reads in a file containing constraints and weights, doesn’t return anything

a calls b: a b

b must be called before a: b a

data\_prob.py: (needs info about weights and violations)

probability

neg\_log\_probability update\_maxent\_values

update\_maxent\_values z\_score

maxent\_value

neg\_log\_probability\_with\_gradient

update\_maxent\_values z\_score

gen.py

sigma\_1k

sigma\_0k