allthemath.org Vol II Episode VIII – Python cheat sheet

Eigenvalues and eigenvectors of a matrix:

```
eigstuff = linalg.eig(A)
```

This returns a "tuple" with two items:

- **eigstuff[0]** is an array of the eigenvalues.
- **eigstuff[1]** is a matrix with the eigenvectors as columns.

Notes:

- The eigenvalues will be in the same order as the eigenvectors (*i.e.*, eigenvalue #7 will be the eigenvalue that corresponds to column #7 of the eigenvector matrix).

- The dominant eigenvector is **eigstuff[1][:,0]**.

- The eigenvectors will be *normalized* (*i.e.*, scaled to give a Euclidean norm of 1).