**Рекомендованные материалы для выполнения Итоговой работы.**

Список функций и материалов, которые могут пригодиться:

Задание 1

* [scipy.misc.derivative](https://docs.scipy.org/doc/scipy-0.15.1/reference/generated/scipy.misc.derivative.html)
* [sympy.symbols](https://www.geeksforgeeks.org/python-sympy-symbols-method/)
* [sympy.diff](https://www.geeksforgeeks.org/python-sympy-diff-method/)
* [sympy.evalf](http://espressocode.top/python-sympy-evalf-method/)

Задание 2

* [numpy.dot](https://pyprog.pro/linear_algebra_functions/dot.html) (\*)

Задание 3

* [numpy.linalg.eig](https://pyprog.pro/linear_algebra_functions/linalg_eig.html) (\*)

Задание 4

* [scipy.optimize.curve\_fit](https://docs.scipy.org/doc/scipy/reference/generated/scipy.optimize.curve_fit.html)
* [scipy.optimize.minimize](https://docs.scipy.org/doc/scipy/reference/generated/scipy.optimize.minimize.html) (+ [method=’COBYLA’](https://docs.scipy.org/doc/scipy/reference/optimize.minimize-cobyla.html#optimize-minimize-cobyla))
* [scipy.optimize.differential\_evolution](https://docs.scipy.org/doc/scipy/reference/generated/scipy.optimize.differential_evolution.html) (+ [scipy.optimize.Bounds](https://docs.scipy.org/doc/scipy/reference/generated/scipy.optimize.Bounds.html#scipy.optimize.Bounds))

Задание 5

* + [sklearn.metrics.pairwise\_distances](https://scikit-learn.org/stable/modules/generated/sklearn.metrics.pairwise_distances.html)
* [numpy.dot](https://pyprog.pro/linear_algebra_functions/dot.html)
* [numpy.linalg.norm](https://pyprog.pro/linear_algebra_functions/linalg_norm.html)
* [numpy.nonzero](https://pyprog.pro/indexing_routines/nonzero.html)

Успехов! 😉