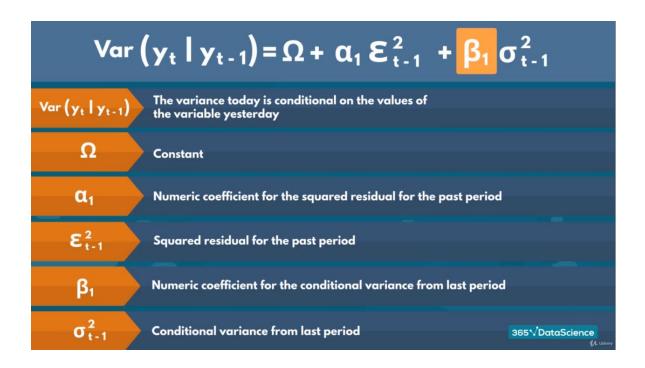
The GARCH Model

Full Name:

The **G**eneralized **A**uto**r**egressive **C**onditional **H**eteroskedasticity Model

Mathematical Notation:



Description:

As the name suggests, the GARCH is just the generalized version of the ARCH model.

This generalization is expressed in including past variances as well as past squared residuals to estimate current (and subsequent) variances.

The generalization comes from the fact that including a single past variance would (in theory) contain in itself the explanatory power of all other previous squared error terms.

It serves as a sort of ARMA equivalent to the ARCH, where we're including both past values and past errors (albeit squared).

The GARCH Model

Implementation of the Simple Model in Python:

