The portfolio selection problem is a decision problem that intends to seek an optimal way to reallocate the given assets for investment in order to maximize the return during a finite time period, which can be typically framed as a kind of optimization problem in a mathematical approach. I would like to introduce Markowitz’s Mean-Variance Model, a classic model that is used by the finance community to study this kind of problem, and discuss how to implement this model through mathematical programming. In this DMC talk, I will present the background of the Portfolio Selection problem as well as the logistics of the Markowitz Model and its limitations.