A beginner Machine Learning Engineer's biggest fear: Mathematics

…and for good reason, because it is after all a daunting thing to learn in of itself, given its immensely vast disciplines. But fear not, I believe firmly that one need not learn every ins, outs, and backwards of this seemingly dreadful thing we call mathematics, not at all, not for machine learning at least, because machine learning not just in my personal experience, but I'm sure for others as well, involves three main key concepts in order to be able to build so called Artificial Intelligence/Machine learning systems: Matrix and vector operations from the sub-discipline of mathematics called Linear Algebra, Partial differentiation from calculus, and basic Standardization and Normalization of values from the discipline of Statistics.

Learning merely these three most basic foundational concepts I personally believe will take you farther in your journey in learning than doing so otherwise, because knowing these will give you the ease of mind to understand how most machine learning systems work under the hood, being able to debug and fix whatever error should arise when need be, and most importantly being able to build them from scratch as opposed to using frameworks and libraries that already have these systems implemented and optimized

which don't get me wrong is not at all bad,

which at best would be at first glance mere black box objects where one would have no idea how it works.

In any machine learning engineers humble beginning therein

There is I believe no other optimal way of learning machine learning than by starting off by understanding the most basic yet one of the most commonly and widely used systems/models in my humble opinion

in any machine learning engineers beginning journey

And as we venture further into the likewise vast world of machine learning and all of its different domains and sub disciplines, we ought to do our very best to muster up the courage within ourselves to face that which we fear the most, not only the Mathematics in the field of AI or Machine Learning but in life as well.