

We thank the reviewer for the comments. We added the following sentences from line 34 to line 49 about the long history of statistical methods:

“However, the rise of machine learning methods, along with an increasingly long observational record, suggests that observation-based, statistical models can be used to understand those relationships. Since the 17th century statistics have been used to record information about wealth and population in Europe (Porter, 1981). For example, William Petty, a British scientist and economist, estimated the census data of Ireland through statistics (Banta, 1987). While the application of statistics had been restricted to a few fields until the 19th century, it gradually extended to other areas since then including physics, astronomy, and recently, air quality (Porter, 1995). At their core, statistical models aim at approximating a relationship between dependent and independent variables, with regression being the most commonly used method, a term that was coined by British statistician Francis Galton back in 1885 when he studied the trend of heights within families (Benirschke, 2004; Galton, 1888; Galton, 1889). The method however precedes the name, with the use of regression starting years before the term was introduced, dating back to the beginning of the 19th century with linear regression being applied to questions in astronomy, such as determining orbits of comets, while the least squares method attributed to Adrien-Marie Legendre and Carl Friedrich Gauss was developed in the early 1800s (Agarwal et al., 2014; Stephen, 1981). In the start of the 20th century, some statisticians introduced the idea of non-linear regression, trying to explain more complex systems (Fisher, 1922). Since then, as computational capacity increased dramatically in the past few decades, regression analysis has been widely used in most scientific fields.”

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