The work deals with neural networks and deep learning models, where the author attempts to view neural networks as a statistical model similar to generalized linear models. After introducing this model and introducing the notation, the work focuses on the ability of neural networks to approximate continuous functions, with a proof of the universality theorem presented. Subsequently, the asymptotic properties of neural networks are examined, and using network estimation, their consistency and asymptotic normality are also proven. These two properties are precisely the subject of investigation in a simulation study on generated data.