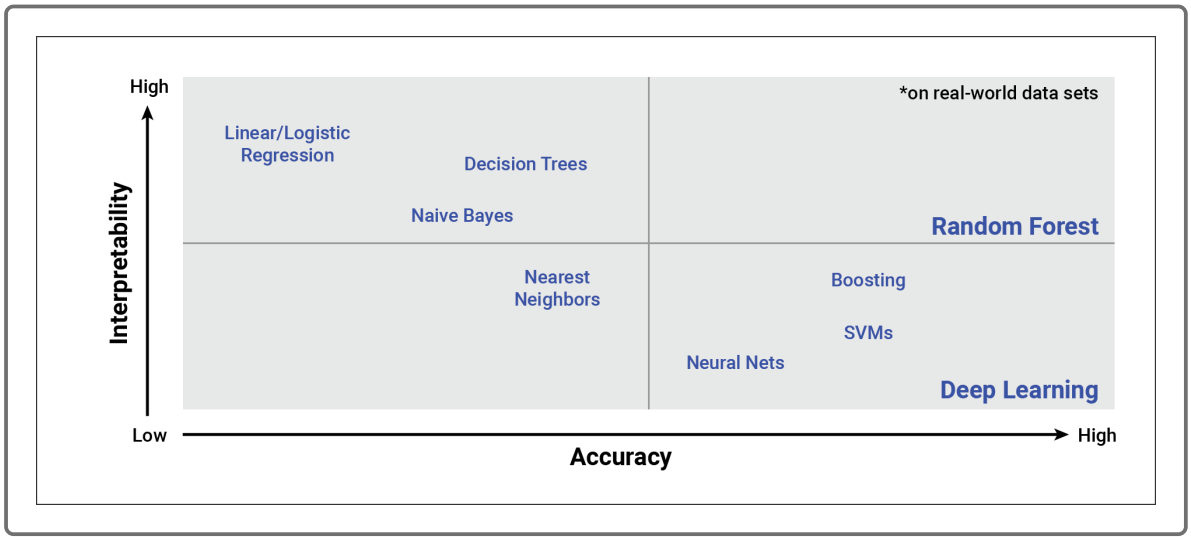
19.5.1 Whose Model Is It Anyway?

Andy trusts Beks to manage so much of the foundation's data and decision-making because he knows she is thinking critically not just about how a particular model works, but also about if it's the best model for the dataset. She knows there are pros and cons to every model. So, now that she's comfortable with neural networks, it's time for her to figure out how they compare with other models.



Now that we are familiar with the structure and relative performance of a basic neural network and deep learning models, it is time to learn when and where to use these models. Contrary to what you may believe, neural networks are not the ultimate solution to all data science problems. As shown in the figure above, there are trade-offs to using the new and popular neural network (and deep learning) models over their older, often more lightweight statistics and machine learning counterparts. In this section, we'll discuss three popular regression/classification algorithms and compare them to a neural network alternative.