Next-generation materials discovery is heavily dependent on the use of Machine Learning (ML). Key ingredients in ML models are well-curated data, descriptors, and appropriate algorithms. In this talk, we discuss the use of ML modeling in materials discovery and compare the effectiveness of descriptors and ML algorithms across physical properties for density functional theory (DFT)-generated 3D and 2D crystalline materials data. In addition to predicting property, it is essential to assess the reliability of the ML model through uncertainty evaluation. While statistical quantities are commonly used to evaluate the quality of the ML model, the uncertainty of each prediction is rarely evaluated. In this talk we address this by comparing different ways of determining the error on single predictions.