**Module 3 Notes**

* TensorFlow is based on vector calculus and statistics. **Convergence** is the point where learning from the data stops. The error stops decreasing or it has reached a minimum possible acceptable error.
* **Gradient Descent** – minimizing the loss function , the difference between the actual answer and the current estimated error.
* **Supervised Learning** – both datapoints x and labels y are available. Two categories of supervised learning is **classification** and **regression**. Classification assigns a discrete label to a datapoint. Regression assigns a real value to a given datapoint.
* **Unsupervised Learning** – only datapoints x without labels y. Inferences are made from patterns within the data without referencing an outcome.
* **Cross-Entropy Loss** – a method for estimating the distance between two probability distributions. Ideal classifiers minimize cross-entropy loss.