Contents for Machine Learning Course:

1. Machine Learning Introduction
    a. Machine Learning in Today's World
    b. Machine Learning Applications
    c. Ethics on usage of AI
2. Statistics and Probability
    a. Types of data
    b. Vectors and Matrices
    c. Mean, Median, Mode
    d. Variance and Standard Deviation
    e. Probability
    f. Activitives using Python
3. Machine Learning Categories
    a. Supervised Learning
    b. Unsupervised Learning
    c. Reinforcement Learning
    d. Deep Learning
4. Supervised Learning Algorithms
    a. Decision Trees
    b. Naive Bayes
    c. Logistic Regression
    d. Support Vector Machines
    e. k-Nearest Neighbours
    f. Activities using Python
5. Unsupervised Learning Algorithms
    a. K-Means clustering
    b. Activities using Python
6. Reinforcement Learning
    a. Markov's Decision Process
7. Deep Learning
    a. Introduction to ANN
    b. Introduction to DNN
    c. Intoduction to CNN
    d. Intoduction to RNN
    e. Activities using Python, Tensorflow, Keras
8. Machine Learning Metrics
    a. Accuracy
    b. Precision
    c. Recall
    d. Confusion Matrix
9. Machine Learning in real world
    a. Data pre-processing
    b. Dimension Reduction

c. Bias and Variance
d. Regularization
e. Ensemble Techniques

**Generative Models can be added to the content if needed