BAIT 509 - Business Applications of Machine Learning
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This is a curated list of **optional** video and lecture resources accompanying lectures for BAIT 509 - Business Applications of Machine Learning. Videos aim to be high-level overviews of concepts. There are two texts referenced here as reading material:
1. Python Data Science Handbook (PDSH) by Jake VanderPlas. This is a practical text specifically about data science with Python.
2. An Introduction to Statistical Learning (ISL) by Gareth James, Daniela Witten, Trevor Hastie & Robert Tibshirani. This text offers a more statistically-focused explanation of many of the concept we will cover in BAIT 509.

Lecture	Topic	Optional additional material	
		Videos/Blogs/Other	**Reading**
1	Introduction to machine learning and decision trees	https://www.youtube.com/watch?v=R9OHn5ZF4Uo https://www.youtube.com/watch?v=7VeUPuFGJHk	PDSH: What is Machine Learning? ISL: 2.1
2	Fundamentals of machine learning and error	https://www.youtube.com/watch?v=MyBSkmUeIEs https://www.youtube.com/watch?v=EuBBz3bI-aA	PDSH: Hyperparameters and Model Validation ISL: 5.1.1
3	Cross-validation, kNN and loess	https://www.youtube.com/watch?v=fSytzGwwBVw	PDSH: Hyperparameters and Model Validation ISL: 3.5, 5.1
4	Feature pre-processing	https://scikit-learn.org/stable/modules/preprocessing.html	PDSH: Feature Engineering ISL: 4.6.6 shows a practical example
5	Naïve Bayes and logistic regression	https://www.youtube.com/watch?v=yIYKR4sgzI8 https://www.youtube.com/watch?v=M59h7CFUwPU	PDSH: Naïve Bayes Classification ISL: 2.2.3
6	Model and feature selection	https://scikit-learn.org/stable/modules/feature_selection.html https://scikit-learn.org/stable/model_selection.html	PDSH: Hyperparameters and Model Validation ISL: 6.1
7	Workflow and forming good machine learning questions from business questions	https://www.altexsoft.com/blog/business/supervised-learning-use-cases-low-hanging-fruit-in-data-science-for-businesses/	
8	Support Vector Machines	https://www.youtube.com/watch?v=efR1C6CvhmE	PDSH: Support Vector Machines ISL: 9
9	Advanced ML techniques	https://scikit-learn.org/stable/modules/ensemble.html	PDSH: Decision Trees and Random Forests ISL: 8.2