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| Index | Summary |
| 1 | **Introduction to Deep Learning**  Perception: the ability to become aware of something through the senses. |
| 2 | **Importance of Data for Deep Learning Algorithms**  Data is most important thing in modern era. When amount of data approaches to 10million then computer approach human perception.  Annotated data: Labeled data |
| 3 | **Interoperability of Deep Learning Algorithm**  Deep learning performs well on small as well as complex problems.  Interoperability: Same DL algos are applicable on various problem domains with a minor change. |
| 4 | **Deep Learning Frameworks**  In deep learning framework, there are 4 blocks   1. Classification    1. Choose a classifier such as Logistic Classifier    2. Stochastic optimization: reduce errors and improve accuracy    3. Data and parameter tuning: Fine tune the data features 2. Deep Networks    1. DNs: Collaborate layers that perform task of similar level    2. Regularization: Understand how sub-problems will solve the parent problem 3. Computer Vision    1. Convolutions    2. Neural Networks 4. Text Processing    1. Recurrent Neural Networks    2. Embeddings    3. Longest Short-term memory |
| 5 | **Linear Classification**  W stands for **weights.** B stands for **Bias** and it is our prior knowledge**.** X is **input vector** or **input class.** Y is **output vector.**  W and B come from training data. |