ANN

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1. **What are Artificial Neural Networks (ANN)?**

   An ANN is a computational model that resembles a biological neural network. It structures data and functions in several independent node units (artificial neurons) that connect with other units to create a relation between specifc input and output. An ANN learns based on the input and output and modifies it's own structure to become "smarter".
2. **Explain the process by which they learn.**
   An ANN will learn by adjusting the weight given to each node. Any node can have several paths, but each path has a different weight. The bigger the weight, "the better the path". This path adjustments are made by "backpropagation". Backpropagartion calculates the error between the given and the desired output and goes several steps back layer through layer in order to adjust weights to compensate for the error.
3. **How would you classify the type of learning of the default ANN?**
   Supervised Learning. An expected output is provided to the ANN in order to make it learn what is expected form all the data analysis.
4. **What is the difference between an ANN and a BN?**

   A BN is composed of nodes that represent a specific event and a decision is taken based on probability. On the other hand, ANN may be composed of "meaningless nodes" with not much information to offer if they are seen individually and transition functions are linear functions that not based on probability.
5. **Name a couple of concrete examples for which ANN are used?**
   -Character Recognition
   -Image Compression
   -Stock Market Predictions
   -Travelling Saleman's Problem