Literature Review Final Plan

Defintions page:

* What is emotion (picard, Automatic Emotion Recognition and classification)
* Aims of affective computing, facial recognition idioms (AVEC 2018/19)
* Explain Cross cultural set up (AVECS)
* In-the-wild vs in-the-lab (AVEC 2019)
* Multimodal = higher cross cultural accuracy (AVEC 2019)
* Ways of representing emotion; explain discrete and continuous

Theme: Automatic Emotion Recognition

* How can it be computerised? (chen multimodal multitask) Discrete = classification, Continuous = regression. (Yang, a regression approach = Thayer chart, etc.) (Continuous emotion recognition, another look at the regression problem)
* Focus is on continuous so we will explore regression techniques for ML ….
* Machine Learning: (Acoustic Feature selection), whats a feature? Examples (AVECS), overfitting (acoustic feature selection). Ranking of labels – ccc vs pearsons, llds, gold standard (AVECS)
* SVRM
* Neural Networks:

(AI book, neural nets 1991)

Paraphrase “

CNNs and feed forward networks rely on the assumption of the independence of data within training and testing set, after each training item the current state of the network is list, temporal information not taken into account. For data containing crucial time or space relationships it may lead to the loss of the majority of information which is located in between the steps.

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* Rnns (Lipton)
* Training rnns (Dreyfus, picton) – briefly explain normal backpropagation (AI book)
* LSTMS (Dieterrich, Hochreiter), exploding/vanishing gardient
* Gated Recurrent Units
* Attention based mechanisms (hori and chorowski)

Conclusions, whats relevant etc. , why is neural net better than svr? Which ann specifically? (Chen) says LSTMs outperform SVRs, why add an attention mechanism?