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## To the BIC students - some further info on the lecture today...

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To: David Corne &lt;dwcorne@gmail.com&gt;

Hi David,  
Please add this further info on your webpage please:

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More MLP + Backpropagation applications:

- Sonar target recognition  
(Gorman and Sejnowski, 1988)

- Zipcode Recognition  
(Y. LeCun, 1990)

- ALVINN (Autonomous Land Vehicle In a Neural Network)  
(Pomerleau, 1996)

- Face Recognition - more info <http://www.cs.cmu.edu/~tom/faces.html>  
(Mitchell, 1997)

and more:

application	#weights	#samples	error	ref.
text -> speech	25000	5000	0.20	Sejnowski
sonar target rec	1105	192	0.15	Gorman
car control	>36000	1200	car drives on winding road	Pomerleau
back-gammon	>11000	3000	computer champion	Tesauro
sex rec from faces	>36000	90	0.09	Golomb
char rec	9900	5000	0.055	Sato
remote sensing	1800	50	0.05-0.10	Kamata
signature verif.	480	280	0.05	Sabourin

T.J. Sejnowski and C.R. Rosenberg, *REX-1: a parallel network that learns to read aloud*, The Johns Hopkins University Electrical Eng. and Comp. Science, 1986.  
 P. Gorman and T.J. Sejnowski, *Learning Classification of Sonar Targets Using Maximaly Parallel Network*, IEEE Transactions on ASSP, vol. 36, no. 7, July 1988.  
 D. Pomerleau, *ALVINN: An Autonomous Land Vehicle in a Neural Network*, in: David S. Touretzky, *Advances in Neural Information Processing Systems I*, 1989.  
 G. Tesauro, *Neurogammon: some computer applications*, Neural Computation, vol. 1, pp. 315-323, 1989.  
 B.A. Golomb, D.T. Lawrence, T.J. Sejnowski, *Sexual: A neural network identifies sex from human faces*, Adv. in Neural Inf. Proc. Sys. I, 1989.  
 A. Sato, K. Yamada, I. Todoroki, and T. Terasaki, *Neural network models for incremental learning*, ICNN, Helsinki, 1991.  
 S. I. Kamata, R.O. Eason, A. Perez, and E. Kawaguchi, *A Neural Network Classifier for LANDSAT Image Data*, Proc. 11th ICPR, The Hague, Vol 2, 573-576, 1992.  
 R. Sabourin and J.P. Dussan, *Off-Line Signature Verification Using Directional PDF and Neural Networks*, Proc. 11th ICPR, The Hague, Vol 2, 321-325, 1992.

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Regards,  
Patricia

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