ex) Face Recognition

* input data

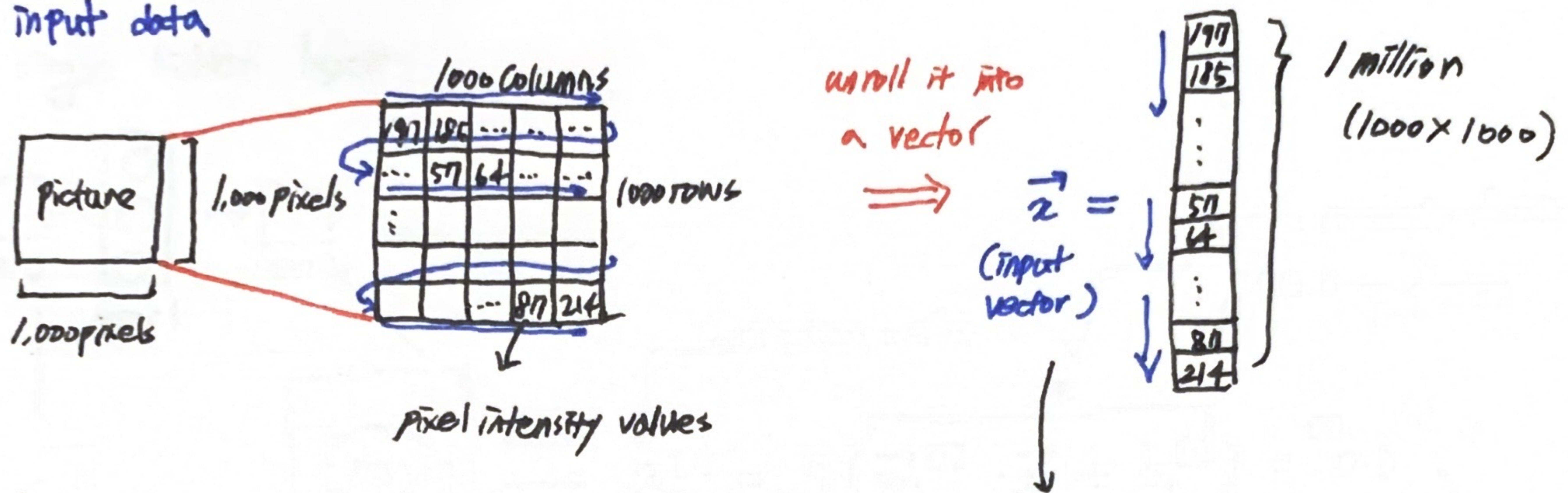pixel intensity values

* face recognition problem : Can you train a NN that takes this input and output the identity of the person in the picture

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~ Neural Network architecture

short lines or short edges

group together lots of short edges segments to detect parts of face (ex. eye, mouth)

aggregating different parts of faces then try to detect presence or absence of larger coarser face shapes

feeding different data to next hidden layer,
NN automatically learns to detect different features