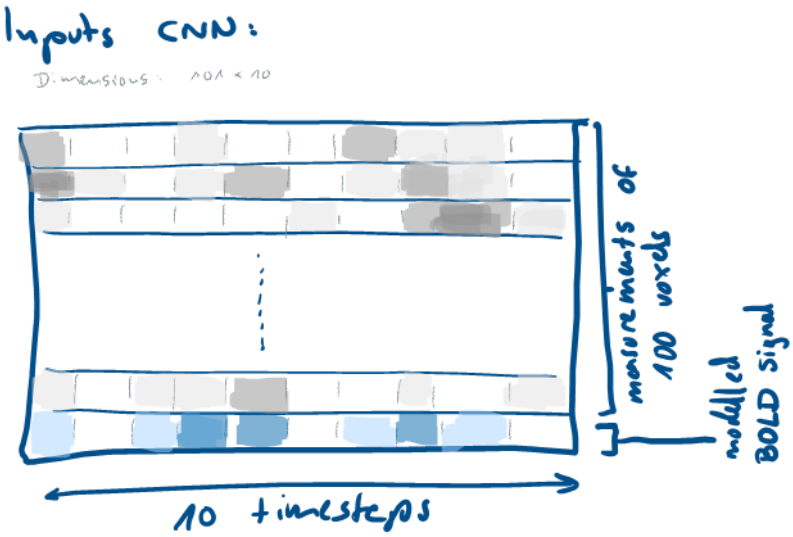
The CNN:

Summary: Explanation why and what input data the CNN got.

Input data for the CNN model:

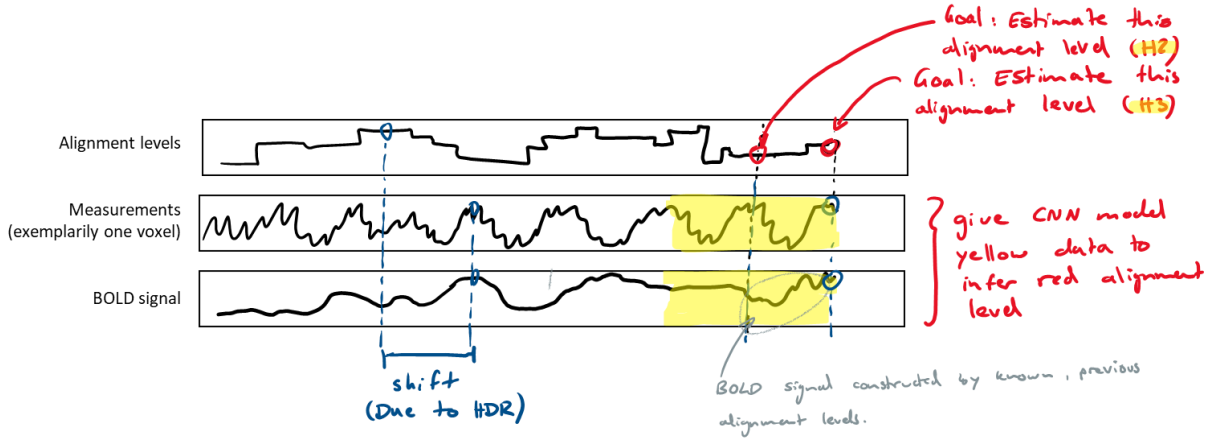
The CNN got the last ten fMRI measurements (for each of the 100 voxels in the ROI). Additionally, it gets the modeled BOLD signal for these timesteps:



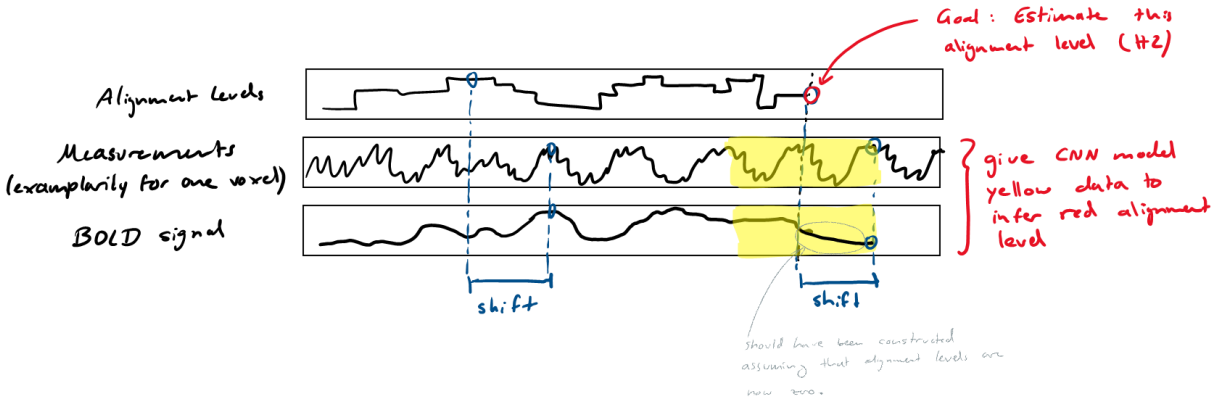
The difference between the input data for H2 and H3 lies in two details: First, I shifted the alignment levels that the model should predict for H2 by five timesteps (equaling 7.5 seconds), while in the H3 case this data is not shifted. This will be explained in the paragraph "Motivation for input data". Second, I aimed to construct the BOLD signals differently. This, too, will be explained in the next paragraph.

In H2, I now noticed that I did not implement the BOLD model as I hoped to implement it – more on that in the paragraph "The mistake".

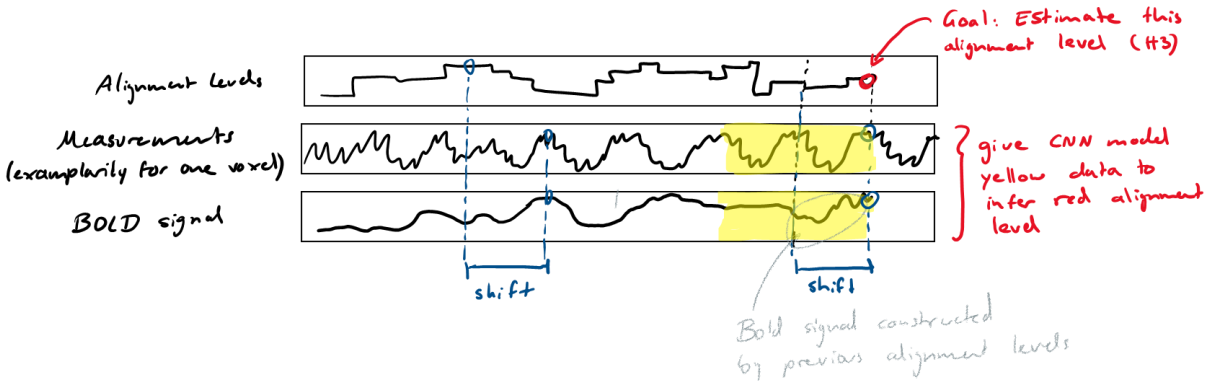
Motivation for input data:



Data for H2: I wanted to give the CNN the measured data and the BOLD signal, constructed from the alignment levels up to $t_{(-7.5 \text{ seconds})}$. With that data, I hoped that the CNN could pick up the difference between the measurement signals and the modeled BOLD signal. Using this difference, I hoped that the model could infer whether and how much the alignment level had increased or decreased.



Data for H3: The motivation when selecting the input data for the CNN was identical to the reasons for the selection of the H2 data. Only difference: The BOLD signal got all alignment levels up to t_0.



The mistake:

Instead of giving the CNN for H2 the BOLD signal, that was constructed until $t_{(-7.5\ seconds)}$, I gave it the BOLD signal up to t_0. This is a big mistake, since the BOLD signal is then *also* constructed on the alignment level at $t_{(-7.5\ seconds)}$, which should be predicted.