**Notes from the analysis of the Continuous Response Task (CRT)**

**spm\_report.pdf**

This is the output of SPM analysis. The first page is the motion correction plots. While the magnitude of the movement seems quite reaching almost 2 mm deviation from the beginning of the scan to the end in the Y-axis (left to right), this is actually very good because the movement from scan to scan is very small. The second page shows the coregistration of the functional scan to the high-resolution structural scan.

**CRT-L>R.png and CRT-R>L.png**

These are the statistical results showing areas activated more for movement of the fingers on the left-hand than right-hand and vice versa. As expected, right hemisphere motor cortex activates more for the left-hand and vice versa.

**CRT-LRing.png, CRT-LIndex.png, CRT-RRing.png, CRT-RIndex.png**

One of the goals with this experiment was to see whether we could localize the movement of the different digits on the same hand to spatially distinct locations in motor cortex and the cerebellum. These reports are located at the peak area of activation in motor cortex for each individual digit. The coordinate for the peak is to the right of the glass brains. For the right hand the Ring and Index fingers do end up having peaks that are 3 mm apart from each other! The left hand the two fingers have the same peak location.

**CRT-LRing vs LIndex-Cerebellum.png**

These are overlays of left ring finger (figures on the right side) and left index finger (figures on the right side). The crosshair is at the same location in both figures and is located at the peak for the ring finger. Here we see that the peak for left index finger is about 3 mm posterior and 3 mm inferior to the where the crosshair is located!