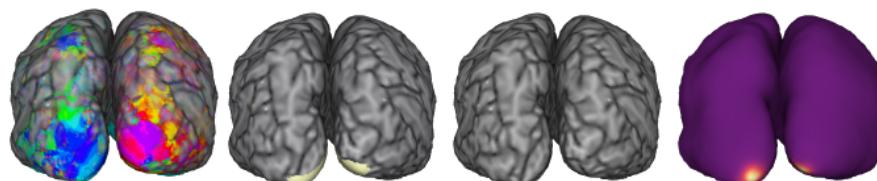


session 1

① find best vertex



pRF X V1 X curvature = target

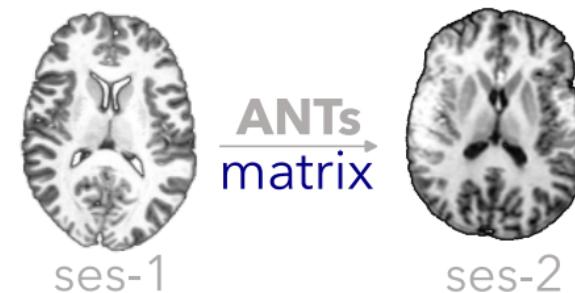
② derive line orientation

$$\vec{a} = \begin{bmatrix} d \\ e \\ f \end{bmatrix} \quad \vec{b} = \begin{bmatrix} 1 \\ 0 \\ 0 \end{bmatrix}_x \begin{bmatrix} 0 \\ 1 \\ 0 \end{bmatrix}_y \begin{bmatrix} 0 \\ 0 \\ 1 \end{bmatrix}_z$$
$$\cos(\theta) = \frac{\vec{a} \cdot \vec{b}}{\|\vec{a}\| \cdot \|\vec{b}\|}$$

A brain model with a green line segment drawn from the center (origin) to a point on the surface of the brain. The label "ses-1" is written in green at the end of the line segment.

session 2

③ coregister



④ apply matrix

coordinate

$$\begin{bmatrix} -7.42 \\ -92.97 \\ -15.28 \end{bmatrix} \times \text{matrix} = \begin{bmatrix} 2.78 \\ -94.18 \\ -16.63 \end{bmatrix}$$

normal vector

$$\vec{a}' = \begin{bmatrix} d \\ e \\ f \end{bmatrix} \times \text{matrix} = \begin{bmatrix} 39.25^\circ \\ 50.75^\circ \\ -16.63^\circ \end{bmatrix}$$

A brain model with a green line segment drawn from the center (origin) to a point on the surface of the brain. The label "ses-2" is written in green at the end of the line segment.