Species	Number of vertices	Mesh resolution [mm]	Alpha value
Senegal galago	$\sim 20 \mathrm{k}$	0.3	4
Night Monkey	$\sim 20 \mathrm{k}$	0.6	5
White-faced saki	$\sim 20k$	0.7	6
Tufted capuchin	$\sim 25k$	0.9	9
Rhesus macaque	$\sim 25 k$	1.1	9
Black-white colobus	$\sim 25 k$	1.2	9
Wooly monkey	$\sim 25 k$	1.0	10
Gray-cheeked mangabey	$\sim 25k$	1.1	10
Chimpanzee	\sim 35k	1.5	10
Bonobo	$\sim 25 k$	1.7	10
Gorilla	$\sim 25k$	1.7	10
Human	\sim 40-45k	2.2	20

Table 1: Mesh properties for each species



Figure 1: Distribution of shape index for all species. Shape index value of [-1, -0.375] are convex, [0.375, 1] are concave, and [-0.375, 0.375] are classified as saddle. As size of the brain increases for each species, degree of foldedness also increases, which leads to sulcal invaginations and increase in the frequency of concave points.



Figure 2: Distribution of cortical thickness with respect to shape for all species. For each species, cortical thickness varies gradually from thinnest concave shapes to thickest convex shapes.



Figure 3: Systematic correlation of cortical thickness with shape for each subset of the ABIDE dataset.



Figure 4: Systematic correlation of local cortical thickness with local sulcal depth for each species. The local data represent one hemisphere of a single subject. Pearson's r values are shown.



Figure 5: Systematic correlation of local cortical thickness with local shape index for each species. The local data represent one hemisphere of a single subject. Pearson's r values are shown.