CHARACTERIZATION OF REGIONAL APPEARANCE CHANGES IN EARLY BRAIN DEVELOPMENT
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EARLY BRAIN GROWTH
- Major changes in brain MRI images are seen from birth to 2 years.
- Different brain regions grow at varying rates.

MOTIVATION
- Analysis of early brain growth is crucial to understand origin and nature of developmental disabilities and to predict onset of disease.

APPEARANCE CHANGES
- Regional contrast and intensity changes indicate brain maturation patterns.
- Quantifying these contrast and intensity changes for different modalities (T1W, T2W) could help us analyze brain growth and build normative growth models.

RESULTS
- The results show the change in inter and intra region distance over time.

DATA PROCESSING
- Extract intensity Histograms for each Region and tissue class
- Find Inter-Region Hellinger distance $HD(GM(R1),GM(R2)) + HD(WM(R1),WM(R2))$
- Find Within-Region Hellinger distance (Contrast) $HD(GM(R),WM(R))$

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