

IBIIS Retreat Affiliated Faculty

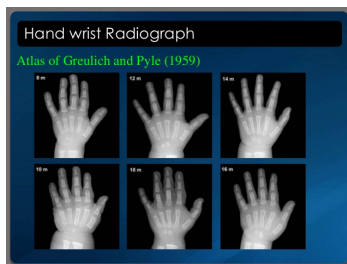
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Machine learning

Performance of a Deep Neural Network Model in Assessing Skeletal Maturity on Pediatric Hand Radiographs

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Bone age



Classic segmentation methods

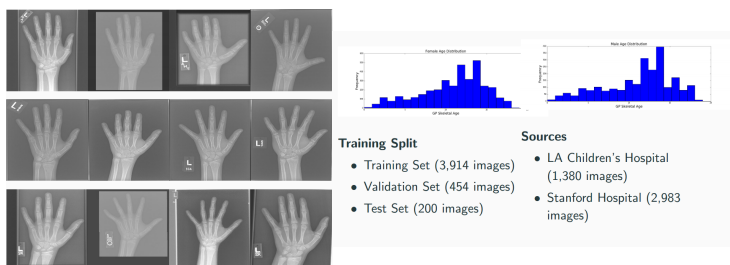
Classical Automated Methods

- Pipelines include segmenting images and extracting features from regions of interest
- Can be very accurate by incorporating prior knowledge about the problem domain
- Very time intensive to come up with correct features for a task and can be susceptible to image noise

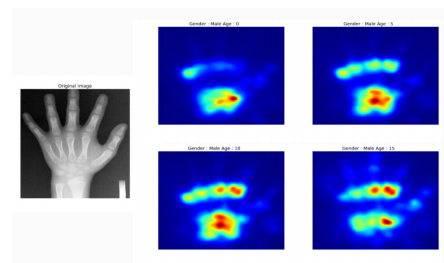
Figure 2: Training, Bone Health, and Len Susskind. Validation and reference value of estimated bone age determination for four children. Academic radiology 17.11 (2010): 1405-1410.

Figure 3: Lucic, Matuszewski, et al. Bone age assessment using SIFT-SIFT Medical Imaging. International Society for Optical and Photonics, 2013.

Data set



Saliency maps



Machine learning - Head US

