

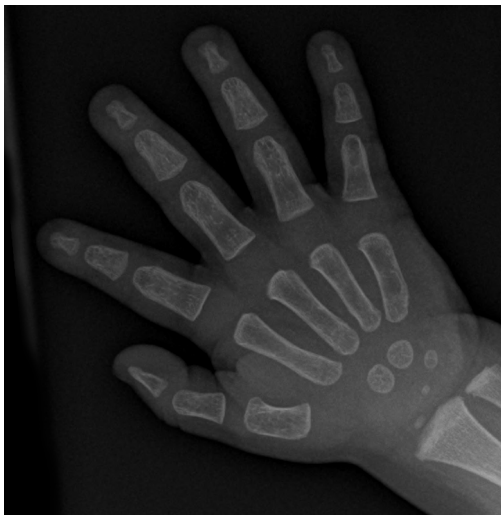
Note

All documents allowed. Code with matlab and send the result to debayle@emse.fr.

Exam: Bone age

Definition from Wikipedia: bone age is the degree of maturation of a child's bones. The bones of the skeleton change in size and shape as a person grows. These changes can be seen by x-ray. The "bone age" of a child is the average age at which children reach this stage of bone maturation.

The most commonly used method is based on a single x-ray radiography of the left hand, fingers, and wrist (see Fig.1).



(a) 1 year old child.



(b) 15 years old child.

Figure 1: X-ray radiographies of hands. Copyright 2012 Mark Hammer and Guillermo Gonzalez. Images taken from <http://bones.getthediagnosis.org/>.



Provide an automatic segmentation of the bones of the different images provided. You can manually avoid the annotations that may be present (most of them have been removed).