Problem Statement : Face Detection Algorithm

**Purpose:** We upload multiple photos of doctors for listing on bajajfinservhealth.in; (Currently 80K and increasing). Often time images are not clear and  we should not allow users to upload these.  
  
**Brief:** Ask is to to create a photo(face) recognition (API based) utility that will accept/reject an image & also assign a ‘fitment score’ to the image; criterion for acceptance /rejection would be provided (e.g. blurred images to be rejected etc.)  
  
API should also return reject reasons for criterion applied as mentioned below.  
  
  **Detail Description**  
• Objective is to accept Profile images if they can meet certain criterion. An image will only be accepted if below criterion’s are met,  
• Identify if photo has an any obstructions in face area (e.g.: mask, sunglasses, hand covering face)  
• Identify if photo if face region is blurred.  
• Identify number of people present in photo.  
• Differentiate avatar/cartoon images from real human faces.  
• Identify watermarked images.  
• Identify if the photo looks professional (pose of the person, clothes, expression).  
• Reject photos that have a face, but face is part of a poster, or id card.  
• Identify if input picture is a photo of a printed photo (eg: picture of a printed passport size photo).  
• Identify very small face regions from photo and enlarge to create a thumbnail.  
  
  **Acceptance /Evaluation criterion:**   
• Cover as many use cases among above that is feasible in the given time.   
• Cover details on how each can be handled and how it will be chained to cover all cases (Solution Architecture)  
• More uses cases one can develop and demonstrate will be criterion. Scalability and accuracy of architecture and solution will be evaluated.