

1 Appendix

1.1 Visualization of Full-size Dental Panoramic X-ray Images

In this section, we present full-size dental panoramic X-ray images. Each image is accompanied by the detection results of a specific local-level dental abnormality, derived from the cropped regions of the image. These abnormalities include tooth defect (Fig. 1), dental caries (Fig. 2), and periapical periodontitis (Fig. 3). The presented results underscore the efficacy of our framework in accurately identifying and localizing these abnormalities with fewer errors, despite their minute scale. This is further evidenced by the pronounced contrast in scale between the full-size panoramic X-ray image and the detected abnormality.

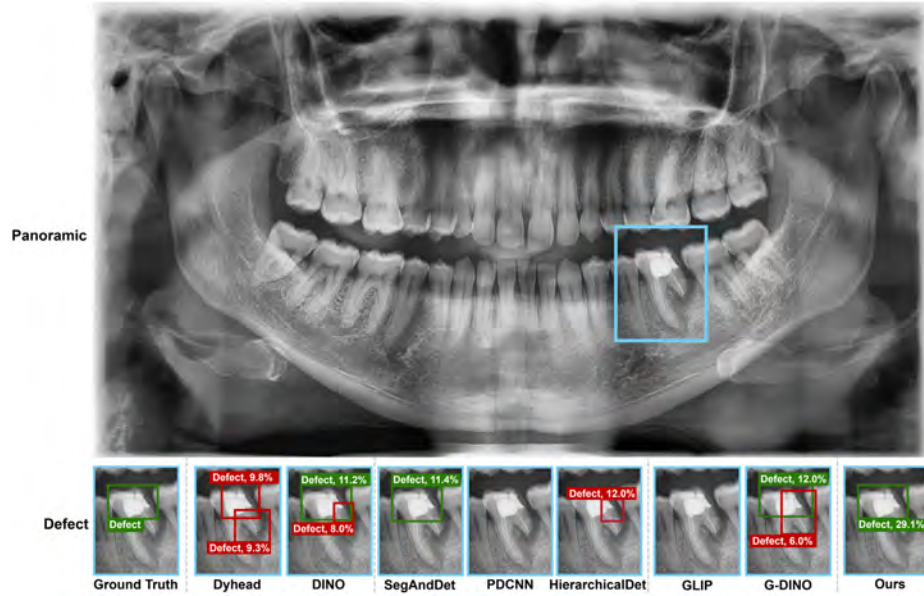


Fig. 1. Visualization of full-size dental panoramic X-ray image and detection results for tooth defect. The blue bounding box on the dental panoramic X-ray image signifies the below cropped area.

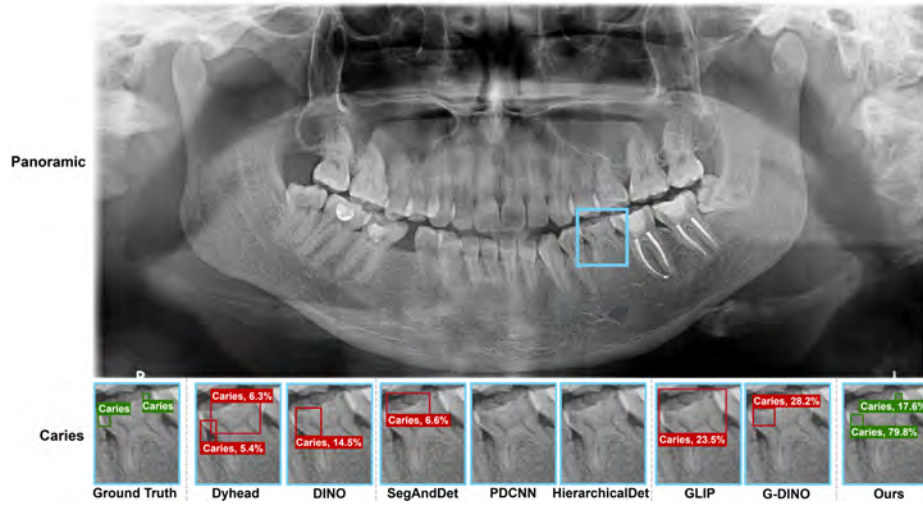


Fig. 2. Visualization of full-size dental panoramic X-ray image and detection results for dental caries. The blue bounding box on the dental panoramic X-ray image signifies the below cropped area.

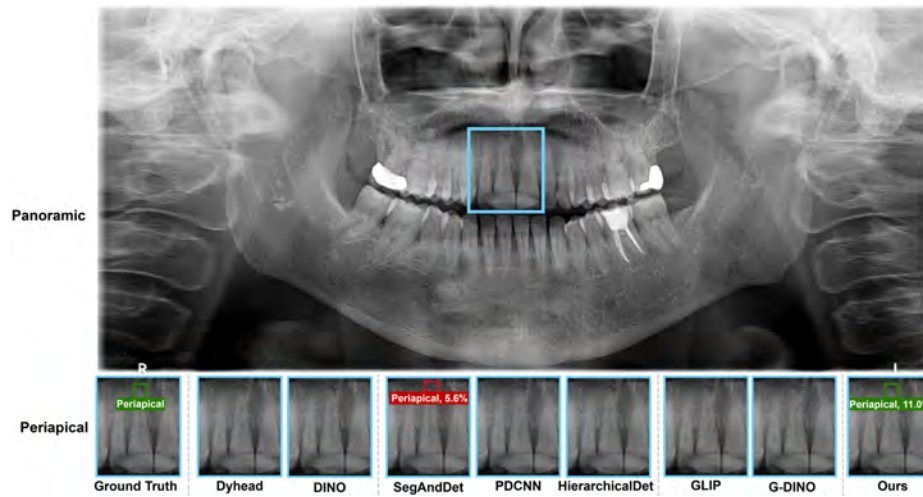


Fig. 3. Visualization of full-size dental panoramic X-ray image and detection results for periapical periodontitis. The blue bounding box on the dental panoramic X-ray image signifies the below cropped area.