

**Table 1.** Teeth level analysis. Average IoU statistics of each category of teeth according to FDI tooth number. 11-17 represents the upper left teeth, 21-27 represents the upper right teeth, 31-37 represents the lower right teeth, 41-47 represents the lower left teeth, and the order of 1-7 is from the middle to the edge.

Method	11	12	13	14	15	16	17
Unet[29]+PointNet[31]	0.650	0.639	0.671	0.628	0.673	0.606	0.668
Unet+L1+PointNet	0.679	0.654	0.706	0.666	0.703	0.662	0.704
Unet+L2+PointNet	0.688	0.662	0.731	0.701	0.749	0.658	0.776
TeethNet+PointNet	0.701	0.705	0.768	0.727	0.776	0.719	0.828
TeethNet+PointNet+L3	0.742	0.737	0.812	0.749	0.788	0.736	0.862
TeethNet+PointNet+PFM	0.721	0.746	0.808	0.745	0.800	0.739	0.844
PX2Tooth(Ours)	<b>0.783</b>	<b>0.789</b>	<b>0.841</b>	<b>0.774</b>	<b>0.837</b>	<b>0.744</b>	<b>0.918</b>
Method	21	22	23	24	25	26	27
Unet[29]+PointNet[31]	0.593	0.616	0.654	0.610	0.698	0.592	0.658
Unet+L1+PointNet	0.609	0.629	0.687	0.633	0.715	0.623	0.691
Unet+L2+PointNet	0.631	0.638	0.692	0.649	0.732	0.651	0.699
TeethNet+PointNet	0.641	0.679	0.723	0.699	0.758	0.681	0.723
TeethNet+PointNet+L3	0.688	0.656	0.764	0.737	0.788	0.706	0.764
TeethNet+PointNet+PFM	0.685	0.641	0.753	0.799	0.811	0.664	0.809
PX2Tooth(Ours)	<b>0.784</b>	<b>0.770</b>	<b>0.810</b>	<b>0.762</b>	<b>0.841</b>	<b>0.720</b>	<b>0.842</b>
Method	31	32	33	34	35	36	37
Unet[29]+PointNet[31]	0.623	0.654	0.631	0.609	0.636	0.588	0.671
Unet+L1+PointNet	0.658	0.689	0.690	0.657	0.662	0.644	0.701
Unet+L2+PointNet	0.667	0.691	0.667	0.632	0.676	0.654	0.755
TeethNet+PointNet	0.694	0.723	0.731	0.689	0.718	0.717	0.798
TeethNet+PointNet+L3	0.756	0.789	0.765	0.752	0.769	0.719	0.829
TeethNet+PointNet+PFM	0.774	0.799	0.778	0.731	0.788	0.722	0.834
PX2Tooth(Ours)	<b>0.833</b>	<b>0.866</b>	<b>0.805</b>	<b>0.774</b>	<b>0.806</b>	<b>0.747</b>	<b>0.861</b>
Method	41	42	43	44	45	46	47
Unet[29]+PointNet[31]	0.616	0.633	0.598	0.626	0.639	0.589	0.698
Unet+L1+PointNet	0.644	0.665	0.655	0.659	0.658	0.638	0.732
Unet+L2+PointNet	0.661	0.659	0.649	0.672	0.679	0.627	0.769
TeethNet+PointNet	0.701	0.697	0.692	0.707	0.729	0.683	0.789
TeethNet+PointNet+L3	0.731	0.783	0.748	0.739	0.762	0.733	0.822
TeethNet+PointNet+PFM	0.750	0.757	0.733	0.761	0.759	0.720	0.819
PX2Tooth(Ours)	<b>0.773</b>	<b>0.834</b>	<b>0.776</b>	<b>0.802</b>	<b>0.793</b>	<b>0.753</b>	<b>0.856</b>