

Multimodal Text Report Generation for Oral and Dental Image Analysis

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ODIN 2026 extends dental AI benchmarks to clinical report generation, linking 3D imaging and photographs with clinical language.



Bite2Text

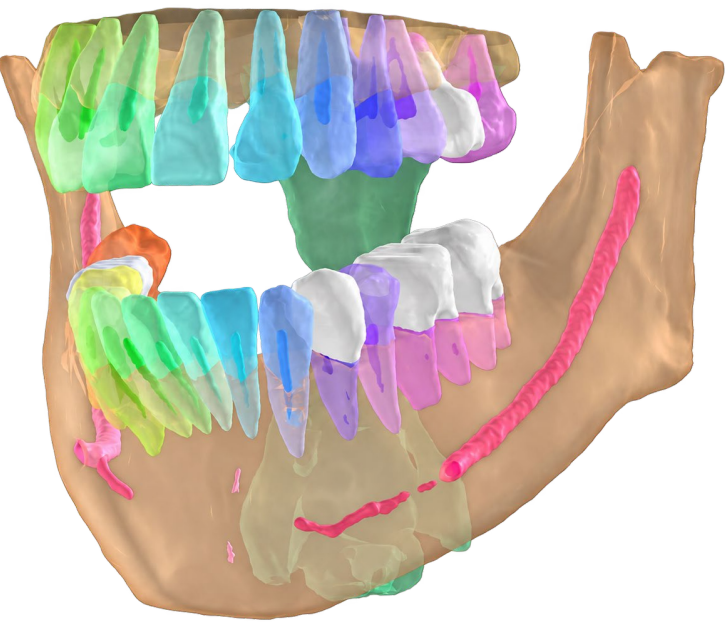
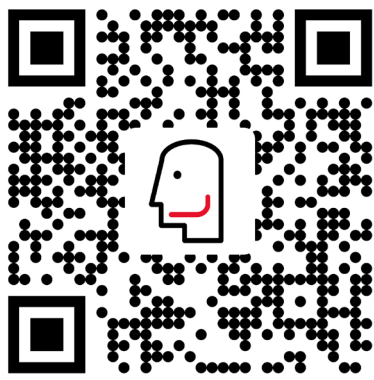
Maxillofacial and surgical reports from CBCT

Orthodontic reports from IOS and IOP

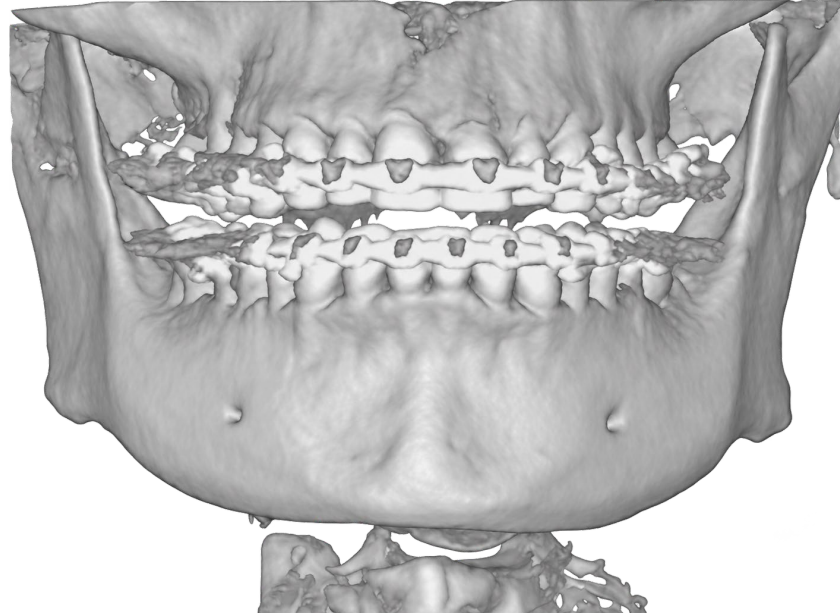
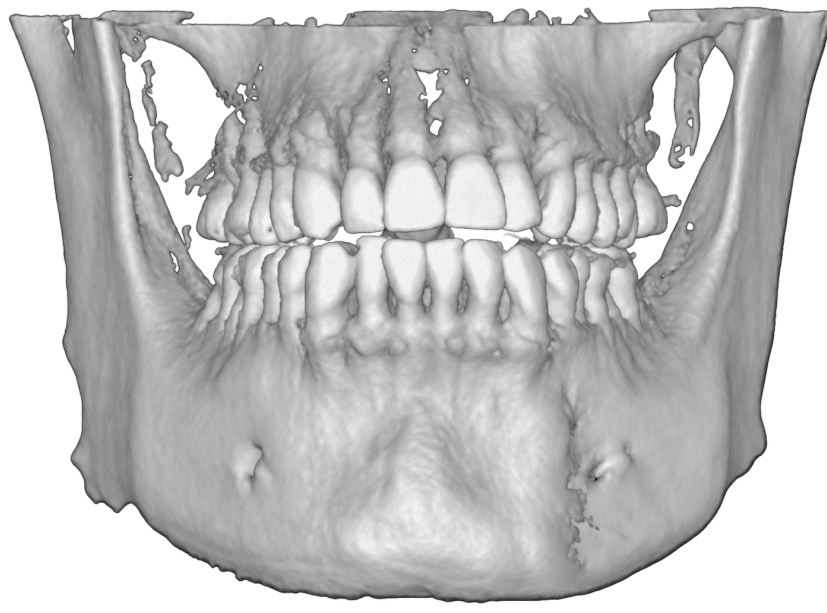
Input CBCT volumes
Report Dentition, bone quality and anatomical risks
Clinical Use Implant placement, extractions and sinus lifts
Challenge Reasoning over complex 3D volumes

Input 3D intraoral scans + 2D intraoral photographs
Report Occlusion, crowding, spacing and malocclusion
Clinical Use Findings relevant to treatment planning
Challenge Fusing 3D and 2D features

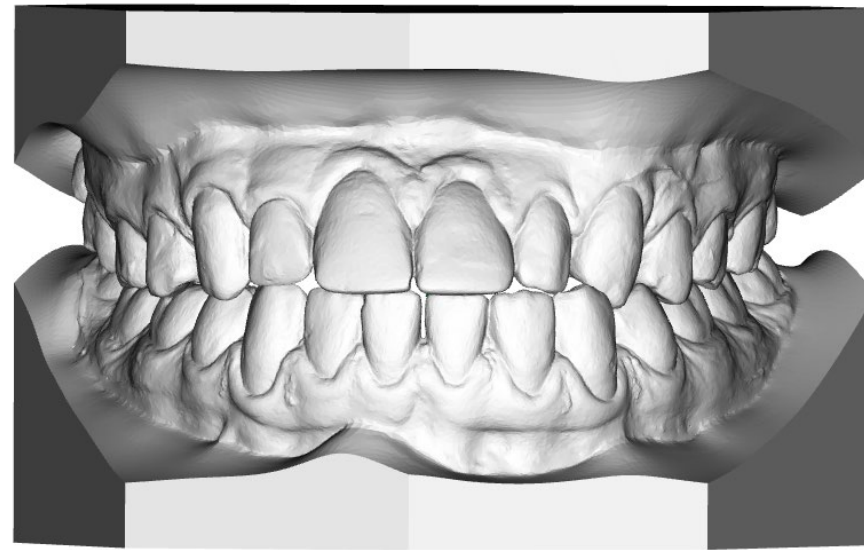
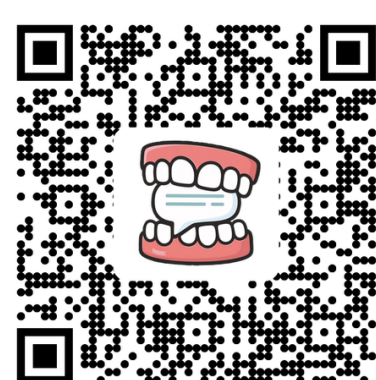
625 CBCT cases



The MANDIBLE is fully included, with the body and both ascending rami. The right and left mandibular canals are regular in course and caliber. The MAXILLA is partially included in the scan volume. Teeth 15 to 25 are present in the upper arch. Prosthetic crown on 24. Prosthetic crowns on 33-34-35-36. Probable conservative treatment involving 46. The left mandibular canal runs close to the root apices of 36. No evident periapical lesions. Mild horizontal bone loss in the posterior sectors.



1,000 IOS-IOP cases



Permanent dentition. The MAXILLA shows a U-shaped, symmetric arch. No crowding or spacing in the upper arch. Bonded palatal retainer on 13-23. Mildly increased overbite, normal overjet. No crossbite. Dental midlines approximately coincident. The MANDIBULAR incisors are well aligned. White spot lesions on buccal surfaces. Pit and fissure staining on premolars and molars. Healthy gingiva, no recession. Findings consistent with post-orthodontic retention.



Evaluation

Imarena.ing.unimore.it

Intraoral scan

IOS scans Photos Reset view

Upper arch Lower arch

Drag to rotate · Scroll to zoom

A Report A SUMMARY

OCCLUSION & ALIGNMENT

Maxillary constriction without crossbite. Deep bite; bilateral Class I molar and canine relationships; increased overjet. Deviated dental midlines; increased curves of Spee and Wilson. Mild upper and moderate lower crowding.

RESTORATIONS

Restorations: 16, 26, 36, 46.

GINGIVA & OTHER FINDINGS

Recession at 15; diffuse extrinsic staining; inflamed gingiva.

A is better

B Report B SUMMARY

OCCLUSION & ALIGNMENT

Maxillary constriction without crossbite. Normal overbite; Class II molar/canine relationships: full on the right, end-to-end on the left. Increased overjet; deviated midlines; increased Spee/Wilson curves. Mild upper and moderate lower crowding.

RESTORATIONS

Restorations: 16, 15, 14, 24, 25, 26, 36, 35, 34, 44, 45, 46. Crown on 36.

GINGIVA & OTHER FINDINGS

Buccal recession at 16, 15, 14, 24, 25, 26, 36, 35, 34, 44, 45, 46.

It's a tie

B is better

BLEU exact n-gram matches

Counts word sequences shared with reference. A flipped **"absent"** or **"present"** still scores high.

METEOR stems + synonyms

Aligns words using stems and synonyms, so **paraphrases** are rewarded, but meaning is still not checked.

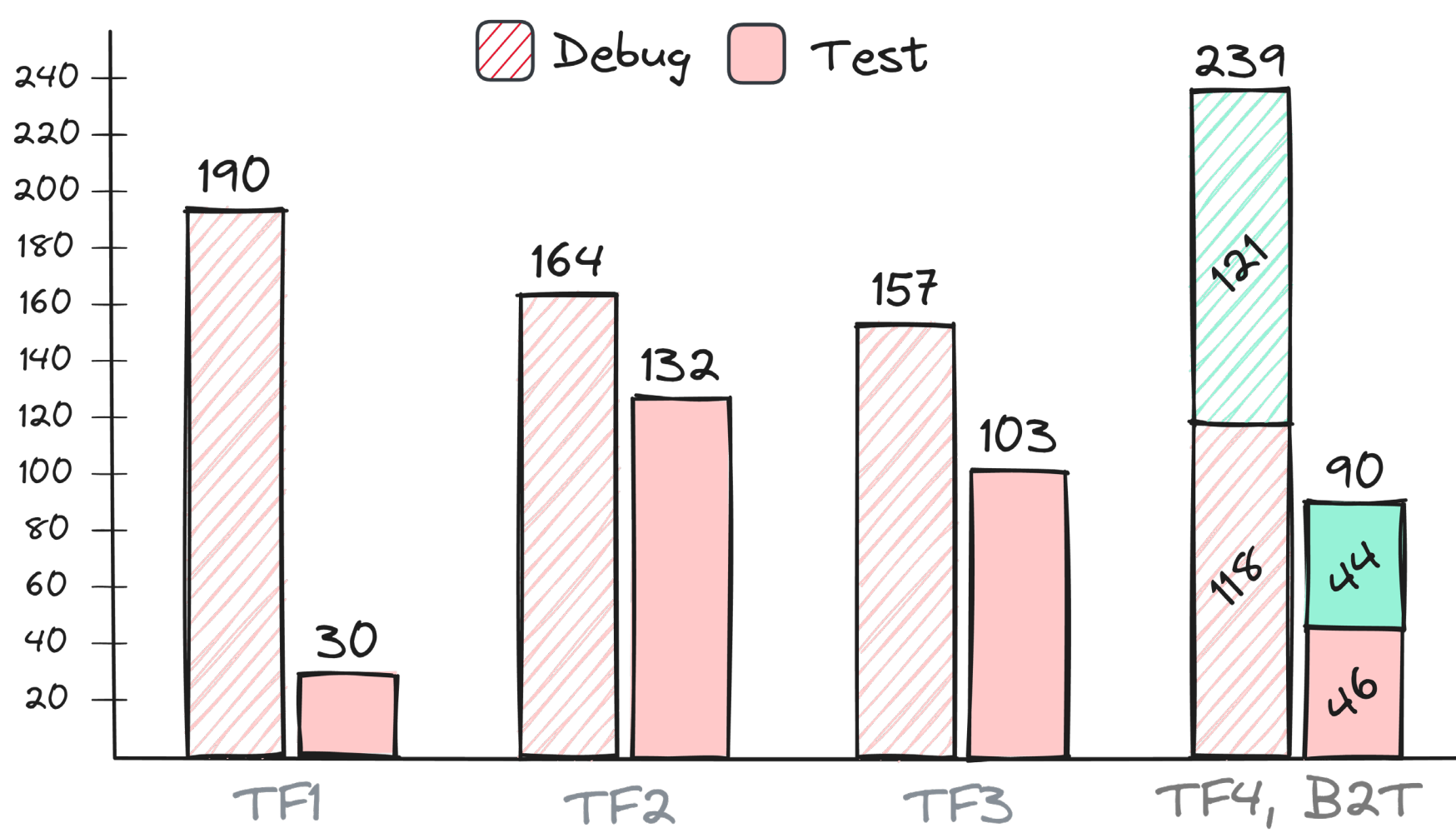
RadFact LLM-judged correctness

An LLM judge checks findings against the reference: **entailed or not**. Scores what the report **gets right**.

Results

ToothFairy4 leaderboard

#	TEAM	BLEU-4	METEOR	RADF.	AGGR	WR %
1	shivam.singh	0.14	0.32	0.39	0.36	86.8
2	ViktorB	0.08	0.28	0.23	0.22	73.3
3	Ryhn	0.12	0.31	0.32	0.30	50.7
4	IAMspiegel	0.07	0.21	0.19	0.18	47.5
5	liolio	0.09	0.29	0.16	0.17	46.7



Bite2Text leaderboard

#	TEAM	BLEU-4	METEOR	RADF.	AGGR	WR %
1	Lijingjing	0.18	0.39	0.53	0.48	82.6
2	Yoonhaeo	0.27	0.48	0.48	0.46	55.7
3	Aliishadman	0.21	0.39	0.43	0.40	50.0
4	Yufei123	0.29	0.47	0.37	0.37	41.9
5	Shayne	0.21	0.45	0.37	0.37	41.9



Yggdrasil

Yggdrasil is the AlmageLab medical-imaging platform used to collect, view and annotate the **challenge data**, linking dental imaging with clinician-authored reports. A **read-only live demo** is open to everyone.



Try the live demo

ygdrasil.unimore.it