Model Card — Model Modeloguay123

Task: Image-to-Image translation

0. Card Metadata

Creation date: 2025/08/06

Versioning

- **Version number**: 0.5
- **Version changes**: new limitations

DOI: 4567894793743589

1. Model Basic Information

Name: Modeloguay123

Creation date: 2022/08/03

Versioning

- **Version number**: 33.77.4567
- **Version changes**: new page added

DOI: 115483.hh5.4

Model scope

- **Summary**: auto-segmentation model
- **Anatomical site**: Thorax

Clearance

- **Type**: Approved for medical use

Approved by

- **Name(s)**: Ana
- **Institution(s)**: UCLouvain
- **Contact email(s)**: ana@gmail.com

Intended users: Radiation oncologists

Observed limitations: None

Type of learning architecture: Random Forest

Developed by

- **Name**: Silvia
- **Institution(s)**: uam
- **Contact email(s)**: silvia@uam.es

Conflict of interest: NA

Software licence: apache 2.0

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2. Technical specifications

2.1 Model overview

Model pipeline

- **Summary:** CT images are blue
- **Model inputs:** ['CT']
- **Model outputs:** ['RTSTRUCT_Acetabulums', 'CBCT']
- **Pre-processing:** cropping the body
- **Post-processing:** hole-filling

2.2 Learning architecture(s)

Learning architecture 1

- **Total number of trainable parameters:** 4000000
- **Number of inputs:** 5
- **Input content:** —
- **Input size:** [128]
- **Number of outputs:** 1
- **Output content:** —
- **Output size:** [128, 56]
- **Loss function:** MSE
- **Batch size:** —
- **Regularisation:** —
- **Uncertainty quantification techniques:** Monte Carlo dropout
- **Explainability techniques:** LIME

2.3 Hardware & software

- **Libraries and dependencies:** Pytorch 3.9

3. Training Data Methodology and Information

Fine tuned form

- **Model name:** NA
- **URL/DOI to model card:** NA
- **Tuning technique:** NA

Training Dataset

General information

- **Total size:** [80]
- **Number of patients:** 7
- **Source:** Private dataset from ClinicsX
- **Acquisition period:** March 2025-August 2025
- **Inclusion / exclusion criteria:** Males were excluded
- **Type of data augmentation:** Flipping [left - right]
- **Strategy for data augmentation:** random

Technical specifications

RTSTRUCT_Acetabulums (model_outputs)

Field	Value
Image resolution	[5.9, 7.6, 3.0]
Patient positioning	Supine
Scan(s) manufacturer and model	NA
Scan acquisition parameters	NA
Scan reconstruction parameters	NA
FOV	NA
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CBCT (model_outputs)

Field	Value
Image resolution	[5.9, 7.6, 3.0]
Patient positioning	head to toes

Field	Value
Scan(s) manufacturer and model	NA
Scan acquisition parameters	NA
Scan reconstruction parameters	NA
FOV	[5.9, 7.6]
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CT (model_inputs)

Field	Value
Image resolution	NA
Patient positioning	NA
Scan(s) manufacturer and model	NA
Scan acquisition parameters	NA
Scan reconstruction parameters	NA
FOV	NA
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- **Reference standard:** NA
- **Reference standard QA:** delineations corrected by 3 doctors

Patient demographics and clinical characteristics

- **Age:** [7.5, 6.8]
- **Sex:** 60% F 40% M

Validation strategy: Cross-validation

Validation data partition: [20%]

Weights initialization: Uniform

Model choice criteria: last epoch

Inference method: single fold

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4. Evaluation Data Methodology, Results and Commissioning

1 Siemens sample evaluation

Evaluation date: 2025/08/05

Evaluated by

- **Name(s):** Ana
- **Institution(s):** UCLouvain
- **Contact email(s):** ana@gmail.com
- **Same as 'Approved by':** Yes

Evaluation frame: retrospective

Sanity check: Model tested on a set of known images

Evaluation dataset

General information

- **Total size:** [577, 567]
- **Number of patients:** 7
- **Source:** public dataset from ucm
- **Acquisition period:** March 2023- April 2024
- **Inclusion / Exclusion criteria:** children excluded
- **URL info:** —

Technical specifications

RTSTRUCT_Acetabulums (model_outputs)

Field	Value
Image resolution	[5.9, 7.6, 3.0]
Patient positioning	supine
Scan(s) manufacturer and model	NA
Scan acquisition parameters	NA
Scan reconstruction parameters	NA
FOV	NA
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CBCT (model_outputs)

Field	Value
Image resolution	NA
Patient positioning	NA
Scan(s) manufacturer and model	NA

Field	Value
Scan acquisition parameters	NA
Scan reconstruction parameters	NA
FOV	NA
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CT (model_inputs)

Field	Value
Image resolution	NA
Patient positioning	NA
Scan(s) manufacturer and model	NA
Scan acquisition parameters	NA
Scan reconstruction parameters	NA
FOV	NA
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- **Reference standard:** NA
- **Reference standard QA:** NA
- **Additional information:** NA

Patient demographics and clinical characteristics

- **Age:** [5.9, 7.6]
- **Sex:** 100% F

Quantitative evaluation

Image Similarity Metrics

SSIM (Structural Similarity Index)

Field	Value
Type	SSIM (Structural Similarity Index)
On Volume	AirWay_Dist
Registration	NONRIGID
Sample Data	—
Mean Data	[5.9, 7.6, 3.0, 5.3]

Field	Value
Figure Appendix Label	—
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Dose Metrics

GPR (Gamma Passing Rate)

Field	Value
Type	GPR (Gamma Passing Rate)
Metric Specifications	—
On Volume	Bone_Mastoid
Registration	NONE
Treatment Modality	External beam radiation therapy (EBRT) - Protons - Scanning beam single-field optimization
Dose Engine	Collapsed cone convolution
Dose Grid Resolution	[5.9, 7.6, 3.0]
TPS Vendor	RayStation
Sample Data	—
Mean Data	[5.9, 7.6, 3.0, 6.7]
Figure Appendix Label	—
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Qualitative evaluation

Evaluators information: —

Likert scoring

- Method: —
- Results: —

Turing test

- Method: —
- Results: —

Time saving

- Method: —
- Results: —

Other

- Method: —
- Results: —

Explainability: —

Citation details: —

5. Other considerations

No other considerations provided.