

Configuration Manual

MSc Research Project
Master of Science in Artificial Intelligence

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Project Submission Sheet
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Configuration Manual

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1 Overview

This configuration manual describes all required software tools, cloud services, directory structures, and execution steps needed to successfully replicate the experimental setup used in this project: CoRe-GAN: A Gated Attention Framework for High-Fidelity Restoration of the Codex Borgia

The artefact must be executed in Google Colaboratory (Google Colab). No local installation or local execution environment is required or supported.

The system relies on Google Colab's managed Python environment, GPU runtime, and integration with Google Drive for model and data storage.

2 Required Software and Cloud Services

2.1 Google Colaboratory

The artifact has been developed using Google Colab, which provides:

- Managed Python 3.x environment
- Optional GPU acceleration (T4 or L4 when available)
- Native integration with Google Drive
- Pre-installed scientific and machine learning packages

No additional software installation on the local machine is required.

2.1.1 Google Drive

Google Drive is used as:

- The storage location for the coreGAN project directory
- The source for all model checkpoints, input data, and supporting files required by the notebook

The user must have a Google account to access Google Colab and Google Drive

3 Folder Structure Requirements

Before running the artifact, the user must upload the provided coreGAN folder into their Google Drive root directory.

Do not modify the folder structure for correct use of the artifact

4 Execution Instructions

4.0.1 Upload the coreGAN folder

Place the entire provided coreGAN folder directly into your Google Drive. The folder must not be renamed or relocated, as the Colab notebook uses predefined relative paths.

4.0.2 Open the Notebook in Google Colab

Navigate to the notebooks folder inside the coreGAN folder. There are the options of Inferences or Trainings

4.0.3 Run the notebook

Run the desired cells

5 Dependencies

All required software libraries are installed automatically within Google Colab. The notebook includes installation commands for:

- PyTorch (CPU/GPU based on Colab's environment)
- Torch Vision
- LPIPS
- OpenCV
- sikit image
- numpy, tqdm, pillow

No local installations steps are required and none should be performed outside Colab

6 Notes and Limitations

- Local execution is not supported. The artefact relies on Colab-specific paths and environment configuration.
- Google Drive folder name must remain “coreGAN”. Renaming the folder will cause the notebook to fail because file references are path-dependent.

- Colab environment resets after each session. Drive-mounted files persist, but installed packages in the session must be reloaded automatically through the notebook cells
- Please consider that due to uploading limitations only best_G_codex100.pth checkpoint is available

References