mrcnn

November 25, 2024

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[35]: Igit clone https://github.com/z-mahmud22/Mask-RCNN TF2.14.0.git
     Cloning into 'Mask-RCNN_TF2.14.0'...
     remote: Enumerating objects: 246, done.
     remote: Counting objects: 100% (54/54), done.
     remote: Compressing objects: 100% (35/35), done.
     remote: Total 246 (delta 27), reused 15 (delta 15), pack-reused 192 (from 1)
     Receiving objects: 100% (246/246), 74.90 MiB | 16.31 MiB/s, done.
     Resolving deltas: 100% (75/75), done.
     Updating files: 100% (86/86), done.
[36]: cd Mask-RCNN_TF2.14.0/
     /content/Mask-RCNN_TF2.14.0/Mask-RCNN_TF2.14.0/Mask-RCNN_TF2.14.0
[37]: from google.colab import drive
      drive.mount('/content/drive')
     Drive already mounted at /content/drive; to attempt to forcibly remount, call
     drive.mount("/content/drive", force_remount=True).
[38]: import sys
      print(sys.version)
     3.10.12 (main, Nov 6 2024, 20:22:13) [GCC 11.4.0]
[39]: # Install the Mask R-CNN-specific dependencies
     !pip install -r requirements.txt
     Requirement already satisfied: cython==3.0.5 in /usr/local/lib/python3.10/dist-
     packages (from -r requirements.txt (line 1)) (3.0.5)
     Requirement already satisfied: h5py==3.9.0 in /usr/local/lib/python3.10/dist-
     packages (from -r requirements.txt (line 2)) (3.9.0)
     Requirement already satisfied: imgaug==0.4.0 in /usr/local/lib/python3.10/dist-
     packages (from -r requirements.txt (line 3)) (0.4.0)
     Requirement already satisfied: ipython==7.34.0 in
     /usr/local/lib/python3.10/dist-packages (from -r requirements.txt (line 4))
     (7.34.0)
     Requirement already satisfied: ipython-genutils==0.2.0 in
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/usr/local/lib/python3.10/dist-packages (from -r requirements.txt (line 5))
(0.2.0)
Requirement already satisfied: ipython-sql==0.5.0 in
/usr/local/lib/python3.10/dist-packages (from -r requirements.txt (line 6))
(0.5.0)
Requirement already satisfied: keras==2.14.0 in /usr/local/lib/python3.10/dist-
packages (from -r requirements.txt (line 7)) (2.14.0)
Requirement already satisfied: matplotlib==3.7.1 in
/usr/local/lib/python3.10/dist-packages (from -r requirements.txt (line 8))
(3.7.1)
Requirement already satisfied: numpy==1.23.5 in /usr/local/lib/python3.10/dist-
packages (from -r requirements.txt (line 9)) (1.23.5)
Requirement already satisfied: opency-contrib-python==4.8.0.76 in
/usr/local/lib/python3.10/dist-packages (from -r requirements.txt (line 10))
Requirement already satisfied: opencv-python==4.8.0.76 in
/usr/local/lib/python3.10/dist-packages (from -r requirements.txt (line 11))
(4.8.0.76)
Requirement already satisfied: pillow==9.4.0 in /usr/local/lib/python3.10/dist-
packages (from -r requirements.txt (line 12)) (9.4.0)
Requirement already satisfied: scikit-image==0.19.3 in
/usr/local/lib/python3.10/dist-packages (from -r requirements.txt (line 13))
Requirement already satisfied: scipy==1.11.3 in /usr/local/lib/python3.10/dist-
packages (from -r requirements.txt (line 14)) (1.11.3)
Requirement already satisfied: tensorboard==2.14.1 in
/usr/local/lib/python3.10/dist-packages (from -r requirements.txt (line 15))
(2.14.1)
Requirement already satisfied: tensorflow==2.14.0 in
/usr/local/lib/python3.10/dist-packages (from tensorflow[and-cuda] == 2.14.0->-r
requirements.txt (line 16)) (2.14.0)
Requirement already satisfied: six in /usr/local/lib/python3.10/dist-packages
(from imgaug==0.4.0->-r requirements.txt (line 3)) (1.16.0)
Requirement already satisfied: imageio in /usr/local/lib/python3.10/dist-
packages (from imgaug==0.4.0->-r requirements.txt (line 3)) (2.36.0)
Requirement already satisfied: Shapely in /usr/local/lib/python3.10/dist-
packages (from imgaug==0.4.0->-r requirements.txt (line 3)) (2.0.6)
Requirement already satisfied: setuptools>=18.5 in
/usr/local/lib/python3.10/dist-packages (from ipython==7.34.0->-r
requirements.txt (line 4)) (75.1.0)
Requirement already satisfied: jedi>=0.16 in /usr/local/lib/python3.10/dist-
packages (from ipython==7.34.0->-r requirements.txt (line 4)) (0.19.2)
Requirement already satisfied: decorator in /usr/local/lib/python3.10/dist-
packages (from ipython==7.34.0->-r requirements.txt (line 4)) (4.4.2)
Requirement already satisfied: pickleshare in /usr/local/lib/python3.10/dist-
packages (from ipython==7.34.0->-r requirements.txt (line 4)) (0.7.5)
Requirement already satisfied: traitlets>=4.2 in /usr/local/lib/python3.10/dist-
packages (from ipython==7.34.0->-r requirements.txt (line 4)) (5.7.1)
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Requirement already satisfied: prompt-toolkit!=3.0.0,!=3.0.1,<3.1.0,>=2.0.0 in
/usr/local/lib/python3.10/dist-packages (from ipython==7.34.0->-r
requirements.txt (line 4)) (3.0.48)
Requirement already satisfied: pygments in /usr/local/lib/python3.10/dist-
packages (from ipython==7.34.0->-r requirements.txt (line 4)) (2.18.0)
Requirement already satisfied: backcall in /usr/local/lib/python3.10/dist-
packages (from ipython==7.34.0->-r requirements.txt (line 4)) (0.2.0)
Requirement already satisfied: matplotlib-inline in
/usr/local/lib/python3.10/dist-packages (from ipython==7.34.0->-r
requirements.txt (line 4)) (0.1.7)
Requirement already satisfied: pexpect>4.3 in /usr/local/lib/python3.10/dist-
packages (from ipython==7.34.0->-r requirements.txt (line 4)) (4.9.0)
Requirement already satisfied: prettytable in /usr/local/lib/python3.10/dist-
packages (from ipython-sql==0.5.0->-r requirements.txt (line 6)) (3.12.0)
Requirement already satisfied: sqlalchemy>=2.0 in
/usr/local/lib/python3.10/dist-packages (from ipython-sql==0.5.0->-r
requirements.txt (line 6)) (2.0.36)
Requirement already satisfied: sqlparse in /usr/local/lib/python3.10/dist-
packages (from ipython-sql==0.5.0->-r requirements.txt (line 6)) (0.5.2)
Requirement already satisfied: contourpy>=1.0.1 in
/usr/local/lib/python3.10/dist-packages (from matplotlib==3.7.1->-r
requirements.txt (line 8)) (1.3.1)
Requirement already satisfied: cycler>=0.10 in /usr/local/lib/python3.10/dist-
packages (from matplotlib==3.7.1->-r requirements.txt (line 8)) (0.12.1)
Requirement already satisfied: fonttools>=4.22.0 in
/usr/local/lib/python3.10/dist-packages (from matplotlib==3.7.1->-r
requirements.txt (line 8)) (4.55.0)
Requirement already satisfied: kiwisolver>=1.0.1 in
/usr/local/lib/python3.10/dist-packages (from matplotlib==3.7.1->-r
requirements.txt (line 8)) (1.4.7)
Requirement already satisfied: packaging>=20.0 in
/usr/local/lib/python3.10/dist-packages (from matplotlib==3.7.1->-r
requirements.txt (line 8)) (24.2)
Requirement already satisfied: pyparsing>=2.3.1 in
/usr/local/lib/python3.10/dist-packages (from matplotlib==3.7.1->-r
requirements.txt (line 8)) (3.2.0)
Requirement already satisfied: python-dateutil>=2.7 in
/usr/local/lib/python3.10/dist-packages (from matplotlib==3.7.1->-r
requirements.txt (line 8)) (2.8.2)
Requirement already satisfied: networkx>=2.2 in /usr/local/lib/python3.10/dist-
packages (from scikit-image==0.19.3->-r requirements.txt (line 13)) (3.4.2)
Requirement already satisfied: tifffile>=2019.7.26 in
/usr/local/lib/python3.10/dist-packages (from scikit-image==0.19.3->-r
requirements.txt (line 13)) (2024.9.20)
Requirement already satisfied: PyWavelets>=1.1.1 in
/usr/local/lib/python3.10/dist-packages (from scikit-image==0.19.3->-r
requirements.txt (line 13)) (1.7.0)
Requirement already satisfied: absl-py>=0.4 in /usr/local/lib/python3.10/dist-
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packages (from tensorboard==2.14.1->-r requirements.txt (line 15)) (1.4.0)
Requirement already satisfied: grpcio>=1.48.2 in /usr/local/lib/python3.10/dist-
packages (from tensorboard==2.14.1->-r requirements.txt (line 15)) (1.68.0)
Requirement already satisfied: google-auth<3,>=1.6.3 in
/usr/local/lib/python3.10/dist-packages (from tensorboard==2.14.1->-r
requirements.txt (line 15)) (2.27.0)
Requirement already satisfied: google-auth-oauthlib<1.1,>=0.5 in
/usr/local/lib/python3.10/dist-packages (from tensorboard==2.14.1->-r
requirements.txt (line 15)) (1.0.0)
Requirement already satisfied: markdown>=2.6.8 in
/usr/local/lib/python3.10/dist-packages (from tensorboard==2.14.1->-r
requirements.txt (line 15)) (3.7)
Requirement already satisfied: protobuf>=3.19.6 in
/usr/local/lib/python3.10/dist-packages (from tensorboard==2.14.1->-r
requirements.txt (line 15)) (4.25.5)
Requirement already satisfied: requests<3,>=2.21.0 in
/usr/local/lib/python3.10/dist-packages (from tensorboard==2.14.1->-r
requirements.txt (line 15)) (2.32.3)
Requirement already satisfied: tensorboard-data-server<0.8.0,>=0.7.0 in
/usr/local/lib/python3.10/dist-packages (from tensorboard==2.14.1->-r
requirements.txt (line 15)) (0.7.2)
Requirement already satisfied: werkzeug>=1.0.1 in
/usr/local/lib/python3.10/dist-packages (from tensorboard==2.14.1->-r
requirements.txt (line 15)) (3.1.3)
Requirement already satisfied: astunparse>=1.6.0 in
/usr/local/lib/python3.10/dist-packages (from
tensorflow==2.14.0->tensorflow[and-cuda] ==2.14.0->-r requirements.txt (line 16))
(1.6.3)
Requirement already satisfied: flatbuffers>=23.5.26 in
/usr/local/lib/python3.10/dist-packages (from
tensorflow==2.14.0->tensorflow[and-cuda] ==2.14.0->-r requirements.txt (line 16))
(24.3.25)
Requirement already satisfied: gast!=0.5.0,!=0.5.1,!=0.5.2,>=0.2.1 in
/usr/local/lib/python3.10/dist-packages (from
tensorflow==2.14.0->tensorflow[and-cuda]==2.14.0->-r requirements.txt (line 16))
(0.6.0)
Requirement already satisfied: google-pasta>=0.1.1 in
/usr/local/lib/python3.10/dist-packages (from
tensorflow==2.14.0->tensorflow[and-cuda] ==2.14.0->-r requirements.txt (line 16))
(0.2.0)
Requirement already satisfied: libclang>=13.0.0 in
/usr/local/lib/python3.10/dist-packages (from
tensorflow==2.14.0->tensorflow[and-cuda]==2.14.0->-r requirements.txt (line 16))
(18.1.1)
Requirement already satisfied: ml-dtypes==0.2.0 in
/usr/local/lib/python3.10/dist-packages (from
tensorflow==2.14.0->tensorflow[and-cuda]==2.14.0->-r requirements.txt (line 16))
(0.2.0)
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Requirement already satisfied: opt-einsum>=2.3.2 in
/usr/local/lib/python3.10/dist-packages (from
tensorflow==2.14.0->tensorflow[and-cuda]==2.14.0->-r requirements.txt (line 16))
(3.4.0)
Requirement already satisfied: termcolor>=1.1.0 in
/usr/local/lib/python3.10/dist-packages (from
tensorflow==2.14.0->tensorflow[and-cuda]==2.14.0->-r requirements.txt (line 16))
(2.5.0)
Requirement already satisfied: typing-extensions>=3.6.6 in
/usr/local/lib/python3.10/dist-packages (from
tensorflow==2.14.0->tensorflow[and-cuda] ==2.14.0->-r requirements.txt (line 16))
(4.12.2)
Requirement already satisfied: wrapt<1.15,>=1.11.0 in
/usr/local/lib/python3.10/dist-packages (from
tensorflow==2.14.0->tensorflow[and-cuda]==2.14.0->-r requirements.txt (line 16))
(1.14.1)
Requirement already satisfied: tensorflow-io-gcs-filesystem>=0.23.1 in
/usr/local/lib/python3.10/dist-packages (from
tensorflow==2.14.0->tensorflow[and-cuda] ==2.14.0->-r requirements.txt (line 16))
(0.37.1)
Requirement already satisfied: tensorflow-estimator<2.15,>=2.14.0 in
/usr/local/lib/python3.10/dist-packages (from
tensorflow==2.14.0->tensorflow[and-cuda] ==2.14.0->-r requirements.txt (line 16))
(2.14.0)
Requirement already satisfied: nvidia-cuda-runtime-cu11==11.8.89 in
/usr/local/lib/python3.10/dist-packages (from tensorflow[and-cuda] == 2.14.0->-r
requirements.txt (line 16)) (11.8.89)
Requirement already satisfied: nvidia-cublas-cu11==11.11.3.6 in
/usr/local/lib/python3.10/dist-packages (from tensorflow[and-cuda] == 2.14.0->-r
requirements.txt (line 16)) (11.11.3.6)
Requirement already satisfied: nvidia-cufft-cu11==10.9.0.58 in
/usr/local/lib/python3.10/dist-packages (from tensorflow[and-cuda] == 2.14.0->-r
requirements.txt (line 16)) (10.9.0.58)
Requirement already satisfied: nvidia-cudnn-cu11==8.7.0.84 in
/usr/local/lib/python3.10/dist-packages (from tensorflow[and-cuda] == 2.14.0->-r
requirements.txt (line 16)) (8.7.0.84)
Requirement already satisfied: nvidia-curand-cu11==10.3.0.86 in
/usr/local/lib/python3.10/dist-packages (from tensorflow[and-cuda] == 2.14.0->-r
requirements.txt (line 16)) (10.3.0.86)
Requirement already satisfied: nvidia-cusolver-cu11==11.4.1.48 in
/usr/local/lib/python3.10/dist-packages (from tensorflow[and-cuda] == 2.14.0->-r
requirements.txt (line 16)) (11.4.1.48)
Requirement already satisfied: nvidia-cusparse-cu11==11.7.5.86 in
/usr/local/lib/python3.10/dist-packages (from tensorflow[and-cuda] == 2.14.0->-r
requirements.txt (line 16)) (11.7.5.86)
Requirement already satisfied: nvidia-nccl-cu11==2.16.5 in
/usr/local/lib/python3.10/dist-packages (from tensorflow[and-cuda] == 2.14.0->-r
requirements.txt (line 16)) (2.16.5)
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Requirement already satisfied: nvidia-cuda-cupti-cu11==11.8.87 in
/usr/local/lib/python3.10/dist-packages (from tensorflow[and-cuda] == 2.14.0->-r
requirements.txt (line 16)) (11.8.87)
Requirement already satisfied: nvidia-cuda-nvcc-cu11==11.8.89 in
/usr/local/lib/python3.10/dist-packages (from tensorflow[and-cuda] == 2.14.0->-r
requirements.txt (line 16)) (11.8.89)
Requirement already satisfied: tensorrt==8.5.3.1 in
/usr/local/lib/python3.10/dist-packages (from tensorflow[and-cuda] == 2.14.0->-r
requirements.txt (line 16)) (8.5.3.1)
Requirement already satisfied: wheel<1.0,>=0.23.0 in
/usr/local/lib/python3.10/dist-packages (from
astunparse>=1.6.0->tensorflow==2.14.0->tensorflow[and-cuda] ==2.14.0->-r
requirements.txt (line 16)) (0.45.0)
Requirement already satisfied: cachetools<6.0,>=2.0.0 in
/usr/local/lib/python3.10/dist-packages (from google-
auth<3,>=1.6.3->tensorboard==2.14.1->-r requirements.txt (line 15)) (5.5.0)
Requirement already satisfied: pyasn1-modules>=0.2.1 in
/usr/local/lib/python3.10/dist-packages (from google-
auth<3,>=1.6.3->tensorboard==2.14.1->-r requirements.txt (line 15)) (0.4.1)
Requirement already satisfied: rsa<5,>=3.1.4 in /usr/local/lib/python3.10/dist-
packages (from google-auth<3,>=1.6.3->tensorboard==2.14.1->-r requirements.txt
(line 15)) (4.9)
Requirement already satisfied: requests-oauthlib>=0.7.0 in
/usr/local/lib/python3.10/dist-packages (from google-auth-
oauthlib<1.1,>=0.5->tensorboard==2.14.1->-r requirements.txt (line 15)) (1.3.1)
Requirement already satisfied: parso<0.9.0,>=0.8.4 in
/usr/local/lib/python3.10/dist-packages (from jedi>=0.16->ipython==7.34.0->-r
requirements.txt (line 4)) (0.8.4)
Requirement already satisfied: ptyprocess>=0.5 in
/usr/local/lib/python3.10/dist-packages (from pexpect>4.3->ipython==7.34.0->-r
requirements.txt (line 4)) (0.7.0)
Requirement already satisfied: wcwidth in /usr/local/lib/python3.10/dist-
packages (from prompt-toolkit!=3.0.0,!=3.0.1,<3.1.0,>=2.0.0->ipython==7.34.0->-r
requirements.txt (line 4)) (0.2.13)
Requirement already satisfied: charset-normalizer<4,>=2 in
/usr/local/lib/python3.10/dist-packages (from
requests<3,>=2.21.0->tensorboard==2.14.1->-r requirements.txt (line 15)) (3.4.0)
Requirement already satisfied: idna<4,>=2.5 in /usr/local/lib/python3.10/dist-
packages (from requests<3,>=2.21.0->tensorboard==2.14.1->-r requirements.txt
(line 15)) (3.10)
Requirement already satisfied: urllib3<3,>=1.21.1 in
/usr/local/lib/python3.10/dist-packages (from
requests<3,>=2.21.0->tensorboard==2.14.1->-r requirements.txt (line 15)) (2.2.3)
Requirement already satisfied: certifi>=2017.4.17 in
/usr/local/lib/python3.10/dist-packages (from
requests<3,>=2.21.0->tensorboard==2.14.1->-r requirements.txt (line 15))
(2024.8.30)
Requirement already satisfied: greenlet!=0.4.17 in
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/usr/local/lib/python3.10/dist-packages (from sqlalchemy>=2.0->ipython-
    sql==0.5.0->-r requirements.txt (line 6)) (3.1.1)
    Requirement already satisfied: MarkupSafe>=2.1.1 in
    /usr/local/lib/python3.10/dist-packages (from
    werkzeug>=1.0.1->tensorboard==2.14.1->-r requirements.txt (line 15)) (3.0.2)
    Requirement already satisfied: pyasn1<0.7.0,>=0.4.6 in
    /usr/local/lib/python3.10/dist-packages (from pyasn1-modules>=0.2.1->google-
    auth<3,>=1.6.3->tensorboard==2.14.1->-r requirements.txt (line 15)) (0.6.1)
    Requirement already satisfied: oauthlib>=3.0.0 in
    /usr/local/lib/python3.10/dist-packages (from requests-oauthlib>=0.7.0->google-
    auth-oauthlib<1.1,>=0.5->tensorboard==2.14.1->-r requirements.txt (line 15))
     (3.2.2)
[40]: python3 setup.py install
    /content/Mask-RCNN_TF2.14.0/Mask-RCNN_TF2.14.0/Mask-RCNN_TF2.14.0/setup.py:9:
    DeprecationWarning: pkg_resources is deprecated as an API. See
    https://setuptools.pypa.io/en/latest/pkg_resources.html
      import pkg_resources
    WARNING:root:Fail load requirements file, so using default ones.
    /usr/local/lib/python3.10/dist-packages/setuptools/dist.py:452:
    SetuptoolsDeprecationWarning: Invalid dash-separated options
     !!
    **********************************
            Usage of dash-separated 'description-file' will not be supported in
    future
            versions. Please use the underscore name 'description_file' instead.
            This deprecation is overdue, please update your project and remove
    deprecated
            calls to avoid build errors in the future.
    https://setuptools.pypa.io/en/latest/userguide/declarative_config.html for
    details.
     11
      opt = self.warn_dash_deprecation(opt, section)
    /usr/local/lib/python3.10/dist-packages/setuptools/dist.py:452:
    SetuptoolsDeprecationWarning: Invalid dash-separated options
     !!
     Usage of dash-separated 'license-file' will not be supported in future
            versions. Please use the underscore name 'license_file' instead.
```

```
This deprecation is overdue, please update your project and remove
deprecated
      calls to avoid build errors in the future.
      See
https://setuptools.pypa.io/en/latest/userguide/declarative_config.html for
11
 opt = self.warn_dash_deprecation(opt, section)
/usr/local/lib/python3.10/dist-packages/setuptools/dist.py:452:
SetuptoolsDeprecationWarning: Invalid dash-separated options
!!
  *******************************
      Usage of dash-separated 'requirements-file' will not be supported in
future
      versions. Please use the underscore name 'requirements_file' instead.
      This deprecation is overdue, please update your project and remove
deprecated
      calls to avoid build errors in the future.
      See
https://setuptools.pypa.io/en/latest/userguide/declarative_config.html for
details.
*************************************
!!
 opt = self.warn_dash_deprecation(opt, section)
INFO:root:running install
/usr/local/lib/python3.10/dist-packages/setuptools/_distutils/cmd.py:66:
SetuptoolsDeprecationWarning: setup.py install is deprecated.
!!
************************************
      Please avoid running ``setup.py`` directly.
      Instead, use pypa/build, pypa/installer or other
      standards-based tools.
      See https://blog.ganssle.io/articles/2021/10/setup-py-deprecated.html
for details.
!!
 self.initialize_options()
/usr/local/lib/python3.10/dist-packages/setuptools/_distutils/cmd.py:66:
```

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EasyInstallDeprecationWarning: easy install command is deprecated.
!!
****************************
       Please avoid running ``setup.py`` and ``easy install``.
       Instead, use pypa/build, pypa/installer or other
       standards-based tools.
       See https://github.com/pypa/setuptools/issues/917 for details.
************************************
1.1
  self.initialize_options()
INFO:root:running bdist_egg
INFO:root:running egg_info
INFO:root:creating mask_rcnn_tf2.egg-info
INFO:root:writing mask_rcnn_tf2.egg-info/PKG-INFO
INFO:root:writing dependency_links to mask_rcnn_tf2.egg-
info/dependency_links.txt
INFO:root:writing top-level names to mask rcnn tf2.egg-info/top level.txt
INFO:root:writing manifest file 'mask rcnn tf2.egg-info/SOURCES.txt'
INFO:root:reading manifest file 'mask rcnn tf2.egg-info/SOURCES.txt'
INFO:root:reading manifest template 'MANIFEST.in'
INFO:root:adding license file 'LICENSE'
INFO:root:writing manifest file 'mask_rcnn_tf2.egg-info/SOURCES.txt'
INFO:root:installing library code to build/bdist.linux-x86_64/egg
INFO:root:running install_lib
INFO:root:running build_py
INFO:root:creating build/lib/mrcnn
INFO:root:copying mrcnn/__init__.py -> build/lib/mrcnn
INFO:root:copying mrcnn/utils.py -> build/lib/mrcnn
INFO:root:copying mrcnn/visualize.py -> build/lib/mrcnn
INFO:root:copying mrcnn/config.py -> build/lib/mrcnn
INFO:root:copying mrcnn/parallel_model.py -> build/lib/mrcnn
INFO:root:copying mrcnn/model.py -> build/lib/mrcnn
INFO:root:creating build/bdist.linux-x86_64/egg
INFO:root:creating build/bdist.linux-x86 64/egg/mrcnn
INFO:root:copying build/lib/mrcnn/__init__.py ->
build/bdist.linux-x86_64/egg/mrcnn
INFO:root:copying build/lib/mrcnn/utils.py -> build/bdist.linux-x86_64/egg/mrcnn
INFO:root:copying build/lib/mrcnn/visualize.py ->
build/bdist.linux-x86_64/egg/mrcnn
INFO:root:copying build/lib/mrcnn/config.py ->
build/bdist.linux-x86_64/egg/mrcnn
INFO:root:copying build/lib/mrcnn/parallel_model.py ->
build/bdist.linux-x86_64/egg/mrcnn
INFO:root:copying build/lib/mrcnn/model.py -> build/bdist.linux-x86_64/egg/mrcnn
INFO:root:byte-compiling build/bdist.linux-x86_64/egg/mrcnn/__init__.py to
```

```
INFO:root:byte-compiling build/bdist.linux-x86_64/egg/mrcnn/utils.py to
     utils.cpython-310.pyc
     INFO:root:byte-compiling build/bdist.linux-x86_64/egg/mrcnn/visualize.py to
     visualize.cpython-310.pyc
     INFO:root:byte-compiling build/bdist.linux-x86_64/egg/mrcnn/config.py to
     config.cpython-310.pyc
     INFO:root:byte-compiling build/bdist.linux-x86_64/egg/mrcnn/parallel_model.py to
     parallel model.cpython-310.pyc
     INFO:root:byte-compiling build/bdist.linux-x86_64/egg/mrcnn/model.py to
     model.cpython-310.pyc
     INFO:root:creating build/bdist.linux-x86_64/egg/EGG-INFO
     INFO:root:copying mask_rcnn_tf2.egg-info/PKG-INFO ->
     build/bdist.linux-x86_64/egg/EGG-INFO
     INFO:root:copying mask_rcnn_tf2.egg-info/SOURCES.txt ->
     build/bdist.linux-x86_64/egg/EGG-INFO
     INFO:root:copying mask_rcnn_tf2.egg-info/dependency_links.txt ->
     build/bdist.linux-x86_64/egg/EGG-INFO
     INFO:root:copying mask_rcnn_tf2.egg-info/top_level.txt ->
     build/bdist.linux-x86 64/egg/EGG-INFO
     WARNING:root:zip_safe flag not set; analyzing archive contents...
     INFO:root:creating dist
     INFO:root:creating 'dist/mask_rcnn_tf2-1.0-py3.10.egg' and adding
     'build/bdist.linux-x86_64/egg' to it
     INFO:root:removing 'build/bdist.linux-x86_64/egg' (and everything under it)
     INFO:root:Processing mask_rcnn_tf2-1.0-py3.10.egg
     INFO:root:Removing /usr/local/lib/python3.10/dist-
     packages/mask_rcnn_tf2-1.0-py3.10.egg
     INFO:root:Copying mask_rcnn_tf2-1.0-py3.10.egg to
     /usr/local/lib/python3.10/dist-packages
     INFO:root:Adding mask-rcnn-tf2 1.0 to easy-install.pth file
     Installed /usr/local/lib/python3.10/dist-packages/mask_rcnn_tf2-1.0-py3.10.egg
     INFO:root:Processing dependencies for mask-rcnn-tf2==1.0
     INFO:root:Finished processing dependencies for mask-rcnn-tf2==1.0
[41]: from google.colab import drive
      drive.mount('/content/drive')
     Drive already mounted at /content/drive; to attempt to forcibly remount, call
     drive.mount("/content/drive", force_remount=True).
[42]: import os
      from pycocotools.coco import COCO
      # Specify the path to your dataset (change the path accordingly)
      data_dir = '/content/drive/MyDrive/butterfly.v1i.coco/'
```

__init__.cpython-310.pyc

```
[43]: import os
      import numpy as np
      from pycocotools.coco import COCO
      from mrcnn.utils import Dataset
      class ButterflyDataset(Dataset):
          def load_butterfly(self, dataset_dir, subset):
              """Load a subset of the butterfly dataset."""
              self.add_class("butterfly", 1, "butterfly")
              annotations_path = os.path.join(dataset_dir, subset, '_annotations.coco.
       ⇔json')
              coco = COCO(annotations_path)
              for image_info in coco.loadImgs(coco.getImgIds()):
                  self.add_image(
                      "butterfly",
                      image_id=image_info['id'],
                      path=os.path.join(dataset_dir, subset, image_info['file_name']),
                      width=image_info['width'],
                      height=image_info['height']
                  )
          def load_mask(self, image_id):
              """Load instance masks for a given image."""
              info = self.image_info[image_id]
              coco = COCO(os.path.join(os.path.dirname(info['path']), '_annotations.
       ⇔coco.json'))
              annotations = coco.loadAnns(coco.getAnnIds(imgIds=info['id']))
              masks = [coco.annToMask(ann) for ann in annotations]
              class_ids = [ann['category_id'] for ann in annotations]
              if not masks:
                  return np.zeros((info['height'], info['width'], 0)), np.array([])
              return np.stack(masks, axis=-1), np.array(class_ids)
          def image_reference(self, image_id):
              """Return the file path of the image."""
              return self.image_info[image_id]['path']
[44]: # Initialize and load the training dataset
      dataset_train = butterflyDataset()
      dataset_train.load_butterfly(data_dir, 'train')
```

loading annotations into memory...

dataset_train.prepare()

```
Done (t=0.01s)
     creating index...
     index created!
[45]: # Initialize and load the validation dataset
      dataset_val = butterflyDataset()
      dataset_val.load_butterfly(data_dir, 'valid')
      dataset_val.prepare()
     loading annotations into memory...
     Done (t=0.00s)
     creating index...
     index created!
[46]: # Initialize and load the testing dataset
      dataset_test = butterflyDataset()
      dataset_test.load_butterfly(data_dir, 'test')
      dataset_test.prepare()
     loading annotations into memory...
     Done (t=0.00s)
     creating index...
     index created!
[47]: || wget https://github.com/matterport/Mask_RCNN/releases/download/v2.0/
       →mask_rcnn_coco.h5
     --2024-11-25 09:35:08--
     https://github.com/matterport/Mask RCNN/releases/download/v2.0/mask rcnn_coco.h5
     Resolving github.com (github.com)... 20.205.243.166
     Connecting to github.com (github.com) | 20.205.243.166 | :443... connected.
     HTTP request sent, awaiting response... 302 Found
     Location: https://objects.githubusercontent.com/github-production-release-
     asset-2e65be/107595270/872d3234-d21f-11e7-9a51-7b4bc8075835?X-Amz-
     Algorithm=AWS4-HMAC-SHA256&X-Amz-
     Credential=releaseassetproduction%2F20241125%2Fus-
     east-1%2Fs3%2Faws4_request&X-Amz-Date=20241125T093508Z&X-Amz-Expires=300&X-Amz-S
     ignature=8eba896e4d66d0bd84f20ea573779baf72a4acd72a60947eec418c88ce3cb025&X-Amz-
     SignedHeaders=host&response-content-
     disposition=attachment%3B%20filename%3Dmask_rcnn_coco.h5&response-content-
     type=application%2Foctet-stream [following]
     --2024-11-25 09:35:08-- https://objects.githubusercontent.com/github-
     production-release-
     asset-2e65be/107595270/872d3234-d21f-11e7-9a51-7b4bc8075835?X-Amz-
     Algorithm=AWS4-HMAC-SHA256&X-Amz-
     Credential=releaseassetproduction%2F20241125%2Fus-
     east-1%2Fs3%2Faws4_request&X-Amz-Date=20241125T093508Z&X-Amz-Expires=300&X-Amz-S
     ignature=8eba896e4d66d0bd84f20ea573779baf72a4acd72a60947eec418c88ce3cb025&X-Amz-
```

```
disposition=attachment%3B%20filename%3Dmask_rcnn_coco.h5&response-content-
     type=application%2Foctet-stream
     Resolving objects.githubusercontent.com (objects.githubusercontent.com)...
     185.199.108.133, 185.199.109.133, 185.199.110.133, ...
     Connecting to objects.githubusercontent.com
     (objects.githubusercontent.com) | 185.199.108.133 | :443... connected.
     HTTP request sent, awaiting response... 200 OK
     Length: 257557808 (246M) [application/octet-stream]
     Saving to: 'mask_rcnn_coco.h5'
     mask_rcnn_coco.h5
                       in 1.1s
     2024-11-25 09:35:10 (224 MB/s) - 'mask_rcnn_coco.h5' saved [257557808/257557808]
[48]: # Import necessary libraries
     from mrcnn.model import MaskRCNN
     from mrcnn.config import Config
     # Define your custom configuration class
     class CustomConfig(Config):
         NAME = "butterfly" # Name of the dataset or task
         IMAGES PER GPU = 2 # Adjust this based on the memory of your GPU
         NUM_CLASSES = 2 # Including background (1) + butterfly (1)
         STEPS_PER EPOCH = 100  # Set based on the number of images in your dataset
         VALIDATION_STEPS = 50  # Set validation steps based on the dataset size
         LEARNING_RATE = 0.001 # Learning rate for training
         IMAGE_MIN_DIM = 512 # Minimum image dimension for resizing
         IMAGE_MAX_DIM = 512  # Maximum image dimension for resizing
         GPU_COUNT = 1 # Number of GPUs (adjust if you have more)
     # Instantiate your custom configuration
     config = CustomConfig()
[49]: # Step 1: Create the model in training mode
     model = MaskRCNN(mode="training", config=config, model_dir='/content')
     # Step 2: Load pre-trained weights (COCO weights) but exclude the conflicting ⊔
     model.load_weights('mask_rcnn_coco.h5', by_name=True, exclude=["mrcnn_bbox_fc",u
      # Step 3: Train the model (fine-tuning only the heads)
     model.train(dataset_train, dataset_val, learning_rate=config.LEARNING_RATE, ___
       ⇔epochs=10, layers='heads')
```

SignedHeaders=host&response-content-

Starting at epoch 0. LR=0.001

```
Checkpoint Path:
/content/butterfly20241125T0935/mask_rcnn_butterfly_{epoch:04d}.h5
Selecting layers to train
                        (Conv2D)
fpn_c5p5
fpn_c4p4
                        (Conv2D)
fpn_c3p3
                        (Conv2D)
                        (Conv2D)
fpn_c2p2
fpn_p5
                        (Conv2D)
                        (Conv2D)
fpn_p2
                        (Conv2D)
fpn_p3
                        (Conv2D)
fpn_p4
rpn_model
                        (Functional)
mrcnn_mask_conv1
                        (TimeDistributed)
                        (TimeDistributed)
mrcnn_mask_bn1
mrcnn_mask_conv2
                        (TimeDistributed)
                        (TimeDistributed)
mrcnn_mask_bn2
                        (TimeDistributed)
mrcnn_class_conv1
mrcnn class bn1
                        (TimeDistributed)
mrcnn_mask_conv3
                        (TimeDistributed)
mrcnn mask bn3
                        (TimeDistributed)
mrcnn_class_conv2
                        (TimeDistributed)
                        (TimeDistributed)
mrcnn_class_bn2
mrcnn_mask_conv4
                        (TimeDistributed)
mrcnn_mask_bn4
                        (TimeDistributed)
mrcnn_bbox_fc
                        (TimeDistributed)
mrcnn_mask_deconv
                        (TimeDistributed)
mrcnn_class_logits
                        (TimeDistributed)
mrcnn_mask
                        (TimeDistributed)
/usr/local/lib/python3.10/dist-
packages/keras/src/optimizers/legacy/gradient_descent.py:114: UserWarning: The
`lr` argument is deprecated, use `learning_rate` instead.
  super().__init__(name, **kwargs)
Epoch 1/10
loading annotations into memory...
Done (t=0.01s)
creating index...
index created!
loading annotations into memory...
Done (t=0.01s)
creating index...
index created!
  1/100 [...] - ETA: 9:30 - batch: 0.0000e+00 - size:
2.0000 - loss: 4.0911 - rpn_class_loss: 0.0014 - rpn_bbox_loss: 0.1348 -
mrcnn_class_loss: 0.8893 - mrcnn_bbox_loss: 1.4482 - mrcnn_mask_loss:
1.6175loading annotations into memory...
```

```
Done (t=0.01s)
creating index...
index created!
loading annotations into memory...
Done (t=0.01s)
creating index...
index created!
  2/100 [...] - ETA: 1:33 - batch: 0.5000 - size:
2.0000 - loss: 3.2810 - rpn_class_loss: 0.0020 - rpn_bbox_loss: 0.1037 -
mrcnn_class_loss: 0.6056 - mrcnn_bbox_loss: 1.3723 - mrcnn_mask_loss: 1.1974
loading annotations into memory...
Done (t=0.01s)
creating index...
index created!
loading annotations into memory...
Done (t=0.01s)
creating index...
index created!
  3/100 [...] - ETA: 1:17 - batch: 1.0000 - size:
2.0000 - loss: 3.0033 - rpn_class_loss: 0.0075 - rpn_bbox_loss: 0.0980 -
mrcnn_class_loss: 0.4190 - mrcnn_bbox_loss: 1.3755 - mrcnn_mask_loss:
1.1034loading annotations into memory...
Done (t=0.01s)
creating index...
index created!
loading annotations into memory...
Done (t=0.01s)
creating index...
index created!
  4/100 [>...] - ETA: 1:13 - batch: 1.5000 - size:
2.0000 - loss: 2.6500 - rpn_class_loss: 0.0059 - rpn_bbox_loss: 0.0964 -
mrcnn_class_loss: 0.3227 - mrcnn_bbox_loss: 1.2247 - mrcnn_mask_loss:
1.0003loading annotations into memory...
Done (t=0.01s)
creating index...
index created!
loading annotations into memory...
Done (t=0.01s)
creating index...
index created!
  5/100 [>...] - ETA: 1:09 - batch: 2.0000 - size:
2.0000 - loss: 2.3448 - rpn_class_loss: 0.0047 - rpn_bbox_loss: 0.0903 -
mrcnn_class_loss: 0.2631 - mrcnn_bbox_loss: 1.1021 - mrcnn_mask_loss:
0.8845loading annotations into memory...
Done (t=0.01s)
creating index...
index created!
loading annotations into memory...
```

```
Done (t=0.01s)
creating index...
index created!
  6/100 [>...] - ETA: 1:08 - batch: 2.5000 - size:
2.0000 - loss: 2.2676 - rpn_class_loss: 0.0041 - rpn_bbox_loss: 0.1077 -
mrcnn_class_loss: 0.2276 - mrcnn_bbox_loss: 1.1226 - mrcnn_mask_loss:
0.8055loading annotations into memory...
Done (t=0.01s)
creating index...
index created!
loading annotations into memory...
Done (t=0.01s)
creating index...
index created!
  7/100 [=>...] - ETA: 1:06 - batch: 3.0000 - size:
2.0000 - loss: 2.1504 - rpn_class_loss: 0.0035 - rpn_bbox_loss: 0.1281 -
mrcnn_class_loss: 0.2018 - mrcnn_bbox_loss: 1.0886 - mrcnn_mask_loss:
0.7284loading annotations into memory...
Done (t=0.01s)
creating index...
index created!
loading annotations into memory...
Done (t=0.01s)
creating index...
index created!
  8/100 [=>...] - ETA: 1:05 - batch: 3.5000 - size:
2.0000 - loss: 2.0159 - rpn_class_loss: 0.0033 - rpn_bbox_loss: 0.1169 -
mrcnn_class_loss: 0.1821 - mrcnn_bbox_loss: 1.0311 - mrcnn_mask_loss:
0.6826loading annotations into memory...
Done (t=0.01s)
creating index...
index created!
loading annotations into memory...
Done (t=0.01s)
creating index...
index created!
  9/100 [=>...] - ETA: 1:04 - batch: 4.0000 - size:
2.0000 - loss: 1.9574 - rpn_class_loss: 0.0029 - rpn_bbox_loss: 0.1097 -
mrcnn_class_loss: 0.1631 - mrcnn_bbox_loss: 1.0520 - mrcnn_mask_loss:
0.6296loading annotations into memory...
Done (t=0.01s)
creating index...
index created!
loading annotations into memory...
Done (t=0.01s)
creating index...
index created!
 10/100 [==>...] - ETA: 1:03 - batch: 4.5000 - size:
```

```
2.0000 - loss: 1.8651 - rpn_class_loss: 0.0029 - rpn_bbox_loss: 0.1103 -
mrcnn_class_loss: 0.1505 - mrcnn_bbox_loss: 1.0129 - mrcnn_mask_loss:
0.5886loading annotations into memory...
Done (t=0.00s)
creating index...
index created!
loading annotations into memory...
Done (t=0.01s)
creating index...
index created!
11/100 [==>...] - ETA: 1:02 - batch: 5.0000 - size:
2.0000 - loss: 1.7883 - rpn_class_loss: 0.0028 - rpn_bbox_loss: 0.1203 -
mrcnn_class_loss: 0.1415 - mrcnn_bbox_loss: 0.9696 - mrcnn_mask_loss:
0.5541loading annotations into memory...
Done (t=0.01s)
creating index...
index created!
loading annotations into memory...
Done (t=0.01s)
creating index...
index created!
 12/100 [==>...] - ETA: 1:02 - batch: 5.5000 - size:
2.0000 - loss: 1.7485 - rpn_class_loss: 0.0029 - rpn_bbox_loss: 0.1344 -
mrcnn_class_loss: 0.1331 - mrcnn_bbox_loss: 0.9567 - mrcnn_mask_loss:
0.5214loading annotations into memory...
Done (t=0.01s)
creating index...
index created!
loading annotations into memory...
Done (t=0.01s)
creating index...
index created!
13/100 [==>...] - ETA: 1:01 - batch: 6.0000 - size:
2.0000 - loss: 1.7005 - rpn_class_loss: 0.0027 - rpn_bbox_loss: 0.1368 -
mrcnn class loss: 0.1249 - mrcnn bbox loss: 0.9388 - mrcnn mask loss:
0.4973loading annotations into memory...
Done (t=0.01s)
creating index...
index created!
loading annotations into memory...
Done (t=0.01s)
creating index...
index created!
14/100 [===>...] - ETA: 1:00 - batch: 6.5000 - size:
2.0000 - loss: 1.6333 - rpn_class_loss: 0.0025 - rpn_bbox_loss: 0.1344 -
mrcnn_class_loss: 0.1176 - mrcnn_bbox_loss: 0.9064 - mrcnn_mask_loss:
0.4724loading annotations into memory...
Done (t=0.01s)
```

```
creating index...
index created!
loading annotations into memory...
Done (t=0.01s)
creating index...
index created!
15/100 [===>...] - ETA: 1:00 - batch: 7.0000 - size:
2.0000 - loss: 1.5586 - rpn_class_loss: 0.0024 - rpn_bbox_loss: 0.1294 -
mrcnn_class_loss: 0.1106 - mrcnn_bbox_loss: 0.8626 - mrcnn_mask_loss:
0.4536loading annotations into memory...
Done (t=0.01s)
creating index...
index created!
loading annotations into memory...
Done (t=0.01s)
creating index...
index created!
16/100 [===>...] - ETA: 1:00 - batch: 7.5000 - size:
2.0000 - loss: 1.5024 - rpn_class_loss: 0.0022 - rpn_bbox_loss: 0.1260 -
mrcnn_class_loss: 0.1040 - mrcnn_bbox_loss: 0.8270 - mrcnn_mask_loss:
0.4432loading annotations into memory...
Done (t=0.01s)
creating index...
index created!
loading annotations into memory...
Done (t=0.01s)
creating index...
index created!
17/100 [====>...] - ETA: 1:00 - batch: 8.0000 - size:
2.0000 - loss: 1.4579 - rpn_class_loss: 0.0021 - rpn_bbox_loss: 0.1219 -
mrcnn_class_loss: 0.0984 - mrcnn_bbox_loss: 0.8096 - mrcnn_mask_loss:
0.4259loading annotations into memory...
Done (t=0.01s)
creating index...
index created!
loading annotations into memory...
Done (t=0.01s)
creating index...
index created!
18/100 [====>...] - ETA: 1:00 - batch: 8.5000 - size:
2.0000 - loss: 1.4117 - rpn_class_loss: 0.0020 - rpn_bbox_loss: 0.1178 -
mrcnn_class_loss: 0.0931 - mrcnn_bbox_loss: 0.7877 - mrcnn_mask_loss:
0.4111loading annotations into memory...
Done (t=0.01s)
creating index...
index created!
loading annotations into memory...
Done (t=0.01s)
```

```
creating index...
index created!
19/100 [====>...] - ETA: 59s - batch: 9.0000 - size:
2.0000 - loss: 1.3706 - rpn_class_loss: 0.0019 - rpn_bbox_loss: 0.1160 -
mrcnn_class_loss: 0.0883 - mrcnn_bbox_loss: 0.7647 - mrcnn_mask_loss: 0.3998
loading annotations into memory...
Done (t=0.01s)
creating index...
index created!
loading annotations into memory...
Done (t=0.01s)
creating index...
index created!
20/100 [====>...] - ETA: 58s - batch: 9.5000 - size:
2.0000 - loss: 1.3244 - rpn_class_loss: 0.0018 - rpn_bbox_loss: 0.1120 -
mrcnn_class_loss: 0.0840 - mrcnn_bbox_loss: 0.7367 - mrcnn_mask_loss:
0.3899loading annotations into memory...
Done (t=0.01s)
creating index...
index created!
loading annotations into memory...
Done (t=0.01s)
creating index...
index created!
21/100 [====>...] - ETA: 57s - batch: 10.0000 - size:
2.0000 - loss: 1.2985 - rpn_class_loss: 0.0018 - rpn_bbox_loss: 0.1115 -
mrcnn_class_loss: 0.0805 - mrcnn_bbox_loss: 0.7264 - mrcnn_mask_loss:
0.3784loading annotations into memory...
Done (t=0.01s)
creating index...
index created!
loading annotations into memory...
Done (t=0.01s)
creating index...
index created!
 22/100 [====>...] - ETA: 56s - batch: 10.5000 - size:
2.0000 - loss: 1.2632 - rpn class loss: 0.0017 - rpn bbox loss: 0.1095 -
mrcnn_class_loss: 0.0775 - mrcnn_bbox_loss: 0.7053 - mrcnn_mask_loss:
0.3692loading annotations into memory...
Done (t=0.01s)
creating index...
index created!
loading annotations into memory...
Done (t=0.01s)
creating index...
index created!
23/100 [====>...] - ETA: 55s - batch: 11.0000 - size:
2.0000 - loss: 1.2423 - rpn_class_loss: 0.0016 - rpn_bbox_loss: 0.1073 -
```

```
mrcnn_class_loss: 0.0745 - mrcnn_bbox_loss: 0.6978 - mrcnn_mask_loss:
0.3610loading annotations into memory...
Done (t=0.01s)
creating index...
index created!
loading annotations into memory...
Done (t=0.01s)
creating index...
index created!
24/100 [=====>...] - ETA: 54s - batch: 11.5000 - size:
2.0000 - loss: 1.2162 - rpn_class_loss: 0.0016 - rpn_bbox_loss: 0.1043 -
mrcnn_class_loss: 0.0717 - mrcnn_bbox_loss: 0.6854 - mrcnn_mask_loss:
0.3532loading annotations into memory...
Done (t=0.01s)
creating index...
index created!
loading annotations into memory...
Done (t=0.01s)
creating index...
index created!
25/100 [=====>...] - ETA: 53s - batch: 12.0000 - size:
2.0000 - loss: 1.1921 - rpn_class_loss: 0.0015 - rpn_bbox_loss: 0.1035 -
mrcnn_class_loss: 0.0690 - mrcnn_bbox_loss: 0.6723 - mrcnn_mask_loss:
0.3457loading annotations into memory...
Done (t=0.01s)
creating index...
index created!
loading annotations into memory...
Done (t=0.01s)
creating index...
index created!
26/100 [=====>...] - ETA: 53s - batch: 12.5000 - size:
2.0000 - loss: 1.1728 - rpn_class_loss: 0.0017 - rpn_bbox_loss: 0.1018 -
mrcnn_class_loss: 0.0669 - mrcnn_bbox_loss: 0.6615 - mrcnn_mask_loss:
0.3409loading annotations into memory...
Done (t=0.01s)
creating index...
index created!
loading annotations into memory...
Done (t=0.01s)
creating index...
index created!
27/100 [======>...] - ETA: 52s - batch: 13.0000 - size:
2.0000 - loss: 1.1486 - rpn_class_loss: 0.0016 - rpn_bbox_loss: 0.0997 -
mrcnn_class_loss: 0.0646 - mrcnn_bbox_loss: 0.6460 - mrcnn_mask_loss:
0.3366loading annotations into memory...
Done (t=0.02s)
creating index...
```

```
index created!
loading annotations into memory...
Done (t=0.01s)
creating index...
index created!
28/100 [======>...] - ETA: 51s - batch: 13.5000 - size:
2.0000 - loss: 1.1308 - rpn class loss: 0.0016 - rpn bbox loss: 0.0983 -
mrcnn_class_loss: 0.0625 - mrcnn_bbox_loss: 0.6356 - mrcnn_mask_loss:
0.3329loading annotations into memory...
Done (t=0.01s)
creating index...
index created!
loading annotations into memory...
Done (t=0.01s)
creating index...
index created!
29/100 [======>...] - ETA: 50s - batch: 14.0000 - size:
2.0000 - loss: 1.1033 - rpn_class_loss: 0.0016 - rpn_bbox_loss: 0.0965 -
mrcnn_class_loss: 0.0604 - mrcnn_bbox_loss: 0.6193 - mrcnn_mask_loss:
0.3256loading annotations into memory...
Done (t=0.01s)
creating index...
index created!
loading annotations into memory...
Done (t=0.01s)
creating index...
index created!
30/100 [======>...] - ETA: 49s - batch: 14.5000 - size:
2.0000 - loss: 1.0832 - rpn_class_loss: 0.0016 - rpn_bbox_loss: 0.0954 -
mrcnn_class_loss: 0.0588 - mrcnn_bbox_loss: 0.6059 - mrcnn_mask_loss:
0.3215loading annotations into memory...
Done (t=0.01s)
creating index...
index created!
loading annotations into memory...
Done (t=0.01s)
creating index...
index created!
31/100 [======>...] - ETA: 49s - batch: 15.0000 - size:
2.0000 - loss: 1.0612 - rpn_class_loss: 0.0015 - rpn_bbox_loss: 0.0934 -
mrcnn_class_loss: 0.0572 - mrcnn_bbox_loss: 0.5939 - mrcnn_mask_loss:
0.3151loading annotations into memory...
Done (t=0.01s)
creating index...
index created!
loading annotations into memory...
Done (t=0.01s)
creating index...
```

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index created!
32/100 [======>...] - ETA: 48s - batch: 15.5000 - size:
2.0000 - loss: 1.0401 - rpn_class_loss: 0.0015 - rpn_bbox_loss: 0.0912 -
mrcnn_class_loss: 0.0558 - mrcnn_bbox_loss: 0.5806 - mrcnn_mask_loss:
0.3111loading annotations into memory...
Done (t=0.01s)
creating index...
index created!
loading annotations into memory...
Done (t=0.01s)
creating index...
index created!
33/100 [======>...] - ETA: 47s - batch: 16.0000 - size:
2.0000 - loss: 1.0190 - rpn_class_loss: 0.0014 - rpn_bbox_loss: 0.0898 -
mrcnn_class_loss: 0.0542 - mrcnn_bbox_loss: 0.5681 - mrcnn_mask_loss:
0.3054loading annotations into memory...
Done (t=0.01s)
creating index...
index created!
loading annotations into memory...
Done (t=0.01s)
creating index...
index created!
34/100 [======>...] - ETA: 47s - batch: 16.5000 - size:
2.0000 - loss: 1.0078 - rpn_class_loss: 0.0014 - rpn_bbox_loss: 0.0895 -
mrcnn_class_loss: 0.0529 - mrcnn_bbox_loss: 0.5599 - mrcnn_mask_loss:
0.3041loading annotations into memory...
Done (t=0.01s)
creating index...
index created!
loading annotations into memory...
Done (t=0.01s)
creating index...
index created!
35/100 [=======>...] - ETA: 46s - batch: 17.0000 - size:
2.0000 - loss: 1.0014 - rpn_class_loss: 0.0014 - rpn_bbox_loss: 0.0942 -
mrcnn_class_loss: 0.0514 - mrcnn_bbox_loss: 0.5548 - mrcnn_mask_loss:
0.2996loading annotations into memory...
Done (t=0.01s)
creating index...
index created!
loading annotations into memory...
Done (t=0.01s)
creating index...
index created!
36/100 [=======>...] - ETA: 46s - batch: 17.5000 - size:
2.0000 - loss: 0.9881 - rpn_class_loss: 0.0013 - rpn_bbox_loss: 0.0937 -
mrcnn_class_loss: 0.0501 - mrcnn_bbox_loss: 0.5484 - mrcnn_mask_loss:
```

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0.2945loading annotations into memory...
Done (t=0.01s)
creating index...
index created!
loading annotations into memory...
Done (t=0.01s)
creating index...
index created!
37/100 [=======>...] - ETA: 45s - batch: 18.0000 - size:
2.0000 - loss: 0.9747 - rpn_class_loss: 0.0013 - rpn_bbox_loss: 0.0934 -
mrcnn_class loss: 0.0490 - mrcnn_bbox_loss: 0.5404 - mrcnn_mask loss:
0.2906loading annotations into memory...
Done (t=0.01s)
creating index...
index created!
loading annotations into memory...
Done (t=0.01s)
creating index...
index created!
38/100 [========>...] - ETA: 45s - batch: 18.5000 - size:
2.0000 - loss: 0.9608 - rpn_class_loss: 0.0013 - rpn_bbox_loss: 0.0934 -
mrcnn_class_loss: 0.0478 - mrcnn_bbox_loss: 0.5321 - mrcnn_mask_loss:
0.2862loading annotations into memory...
Done (t=0.01s)
creating index...
index created!
loading annotations into memory...
Done (t=0.01s)
creating index...
index created!
39/100 [=======>...] - ETA: 44s - batch: 19.0000 - size:
2.0000 - loss: 0.9514 - rpn_class_loss: 0.0014 - rpn_bbox_loss: 0.0919 -
mrcnn_class_loss: 0.0470 - mrcnn_bbox_loss: 0.5272 - mrcnn_mask_loss:
0.2839loading annotations into memory...
Done (t=0.01s)
creating index...
index created!
loading annotations into memory...
Done (t=0.01s)
creating index...
index created!
40/100 [========>...] - ETA: 43s - batch: 19.5000 - size:
2.0000 - loss: 0.9393 - rpn_class_loss: 0.0014 - rpn_bbox_loss: 0.0922 -
mrcnn_class_loss: 0.0459 - mrcnn_bbox_loss: 0.5200 - mrcnn_mask_loss:
0.2798loading annotations into memory...
Done (t=0.01s)
creating index...
index created!
```

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loading annotations into memory...
Done (t=0.01s)
creating index...
index created!
41/100 [=========>...] - ETA: 42s - batch: 20.0000 - size:
2.0000 - loss: 0.9259 - rpn_class_loss: 0.0014 - rpn_bbox_loss: 0.0916 -
mrcnn class loss: 0.0451 - mrcnn bbox loss: 0.5118 - mrcnn mask loss:
0.2759loading annotations into memory...
Done (t=0.01s)
creating index...
index created!
loading annotations into memory...
Done (t=0.01s)
creating index...
index created!
42/100 [========>...] - ETA: 41s - batch: 20.5000 - size:
2.0000 - loss: 0.9121 - rpn_class_loss: 0.0014 - rpn_bbox_loss: 0.0905 -
mrcnn_class_loss: 0.0443 - mrcnn_bbox_loss: 0.5028 - mrcnn_mask_loss:
0.2732loading annotations into memory...
Done (t=0.01s)
creating index...
index created!
loading annotations into memory...
Done (t=0.01s)
creating index...
index created!
43/100 [========>...] - ETA: 41s - batch: 21.0000 - size:
2.0000 - loss: 0.9044 - rpn_class_loss: 0.0014 - rpn_bbox_loss: 0.0903 -
mrcnn_class_loss: 0.0434 - mrcnn_bbox_loss: 0.4959 - mrcnn_mask_loss:
0.2734loading annotations into memory...
Done (t=0.01s)
creating index...
index created!
loading annotations into memory...
Done (t=0.00s)
creating index...
index created!
44/100 [=========>...] - ETA: 40s - batch: 21.5000 - size:
2.0000 - loss: 0.8920 - rpn_class_loss: 0.0014 - rpn_bbox_loss: 0.0894 -
mrcnn_class_loss: 0.0425 - mrcnn_bbox_loss: 0.4881 - mrcnn_mask_loss:
0.2705loading annotations into memory...
Done (t=0.01s)
creating index...
index created!
loading annotations into memory...
Done (t=0.01s)
creating index...
index created!
```

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45/100 [=========>...] - ETA: 39s - batch: 22.0000 - size:
2.0000 - loss: 0.8789 - rpn_class_loss: 0.0014 - rpn_bbox_loss: 0.0888 -
mrcnn_class_loss: 0.0417 - mrcnn_bbox_loss: 0.4803 - mrcnn_mask_loss:
0.2667loading annotations into memory...
Done (t=0.01s)
creating index...
index created!
loading annotations into memory...
Done (t=0.01s)
creating index...
index created!
2.0000 - loss: 0.8693 - rpn_class_loss: 0.0014 - rpn_bbox_loss: 0.0881 -
mrcnn_class_loss: 0.0411 - mrcnn_bbox_loss: 0.4740 - mrcnn_mask_loss:
0.2647loading annotations into memory...
Done (t=0.01s)
creating index...
index created!
loading annotations into memory...
Done (t=0.01s)
creating index...
index created!
2.0000 - loss: 0.8616 - rpn_class_loss: 0.0014 - rpn_bbox_loss: 0.0877 -
mrcnn_class_loss: 0.0405 - mrcnn_bbox_loss: 0.4699 - mrcnn_mask_loss:
0.2622loading annotations into memory...
Done (t=0.01s)
creating index...
index created!
loading annotations into memory...
Done (t=0.01s)
creating index...
index created!
2.0000 - loss: 0.8522 - rpn class loss: 0.0013 - rpn bbox loss: 0.0872 -
mrcnn_class_loss: 0.0397 - mrcnn_bbox_loss: 0.4632 - mrcnn_mask_loss:
0.2607loading annotations into memory...
Done (t=0.00s)
creating index...
index created!
loading annotations into memory...
Done (t=0.01s)
creating index...
index created!
49/100 [========>...] - ETA: 36s - batch: 24.0000 - size:
2.0000 - loss: 0.8444 - rpn_class_loss: 0.0013 - rpn_bbox_loss: 0.0865 -
mrcnn_class_loss: 0.0390 - mrcnn_bbox_loss: 0.4587 - mrcnn_mask_loss:
0.2588loading annotations into memory...
```

```
Done (t=0.01s)
creating index...
index created!
loading annotations into memory...
Done (t=0.01s)
creating index...
index created!
2.0000 - loss: 0.8347 - rpn_class_loss: 0.0013 - rpn_bbox_loss: 0.0856 -
mrcnn_class_loss: 0.0383 - mrcnn_bbox_loss: 0.4522 - mrcnn_mask_loss:
0.2573loading annotations into memory...
Done (t=0.01s)
creating index...
index created!
loading annotations into memory...
Done (t=0.01s)
creating index...
index created!
2.0000 - loss: 0.8267 - rpn_class_loss: 0.0013 - rpn_bbox_loss: 0.0848 -
mrcnn_class_loss: 0.0377 - mrcnn_bbox_loss: 0.4464 - mrcnn_mask_loss:
0.2565loading annotations into memory...
Done (t=0.01s)
creating index...
index created!
loading annotations into memory...
Done (t=0.01s)
creating index...
index created!
2.0000 - loss: 0.8169 - rpn_class_loss: 0.0013 - rpn_bbox_loss: 0.0846 -
mrcnn_class_loss: 0.0371 - mrcnn_bbox_loss: 0.4396 - mrcnn_mask_loss:
0.2544loading annotations into memory...
Done (t=0.01s)
creating index...
index created!
loading annotations into memory...
Done (t=0.01s)
creating index...
index created!
53/100 [=========>...] - ETA: 33s - batch: 26.0000 - size:
2.0000 - loss: 0.8119 - rpn_class_loss: 0.0012 - rpn_bbox_loss: 0.0847 -
mrcnn_class_loss: 0.0366 - mrcnn_bbox_loss: 0.4365 - mrcnn_mask_loss:
0.2530loading annotations into memory...
Done (t=0.01s)
creating index...
index created!
loading annotations into memory...
```

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Done (t=0.01s)
creating index...
index created!
2.0000 - loss: 0.8023 - rpn class loss: 0.0012 - rpn bbox loss: 0.0838 -
mrcnn_class_loss: 0.0361 - mrcnn_bbox_loss: 0.4306 - mrcnn_mask_loss:
0.2506loading annotations into memory...
Done (t=0.01s)
creating index...
index created!
loading annotations into memory...
Done (t=0.01s)
creating index...
index created!
55/100 [========>...] - ETA: 32s - batch: 27.0000 - size:
2.0000 - loss: 0.7936 - rpn_class_loss: 0.0012 - rpn_bbox_loss: 0.0836 -
mrcnn_class_loss: 0.0356 - mrcnn_bbox_loss: 0.4251 - mrcnn_mask_loss:
0.2480loading annotations into memory...
Done (t=0.01s)
creating index...
index created!
loading annotations into memory...
Done (t=0.01s)
creating index...
index created!
2.0000 - loss: 0.7853 - rpn_class_loss: 0.0012 - rpn_bbox_loss: 0.0832 -
mrcnn_class_loss: 0.0350 - mrcnn_bbox_loss: 0.4203 - mrcnn_mask_loss:
0.2455loading annotations into memory...
Done (t=0.01s)
creating index...
index created!
loading annotations into memory...
Done (t=0.01s)
creating index...
index created!
2.0000 - loss: 0.7770 - rpn_class_loss: 0.0012 - rpn_bbox_loss: 0.0827 -
mrcnn_class_loss: 0.0345 - mrcnn_bbox_loss: 0.4150 - mrcnn_mask_loss:
0.2437loading annotations into memory...
Done (t=0.01s)
creating index...
index created!
loading annotations into memory...
Done (t=0.01s)
creating index...
index created!
```

```
2.0000 - loss: 0.7697 - rpn_class_loss: 0.0012 - rpn_bbox_loss: 0.0821 -
mrcnn_class_loss: 0.0341 - mrcnn_bbox_loss: 0.4104 - mrcnn_mask_loss:
0.2419loading annotations into memory...
Done (t=0.01s)
creating index...
index created!
loading annotations into memory...
Done (t=0.01s)
creating index...
index created!
2.0000 - loss: 0.7627 - rpn_class_loss: 0.0012 - rpn_bbox_loss: 0.0817 -
mrcnn_class_loss: 0.0337 - mrcnn_bbox_loss: 0.4059 - mrcnn_mask_loss:
0.2401loading annotations into memory...
Done (t=0.01s)
creating index...
index created!
loading annotations into memory...
Done (t=0.01s)
creating index...
index created!
2.0000 - loss: 0.7539 - rpn_class_loss: 0.0012 - rpn_bbox_loss: 0.0809 -
mrcnn_class_loss: 0.0333 - mrcnn_bbox_loss: 0.3998 - mrcnn_mask_loss:
0.2387loading annotations into memory...
Done (t=0.01s)
creating index...
index created!
loading annotations into memory...
Done (t=0.01s)
creating index...
index created!
2.0000 - loss: 0.7471 - rpn_class_loss: 0.0012 - rpn_bbox_loss: 0.0802 -
mrcnn class loss: 0.0329 - mrcnn bbox loss: 0.3957 - mrcnn mask loss:
0.2371loading annotations into memory...
Done (t=0.01s)
creating index...
index created!
loading annotations into memory...
Done (t=0.01s)
creating index...
index created!
2.0000 - loss: 0.7408 - rpn_class_loss: 0.0012 - rpn_bbox_loss: 0.0796 -
mrcnn_class_loss: 0.0325 - mrcnn_bbox_loss: 0.3916 - mrcnn_mask_loss:
0.2359loading annotations into memory...
Done (t=0.01s)
```

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creating index...
index created!
loading annotations into memory...
Done (t=0.01s)
creating index...
index created!
2.0000 - loss: 0.7359 - rpn_class_loss: 0.0012 - rpn_bbox_loss: 0.0792 -
mrcnn_class_loss: 0.0322 - mrcnn_bbox_loss: 0.3883 - mrcnn_mask_loss:
0.2350loading annotations into memory...
Done (t=0.01s)
creating index...
index created!
loading annotations into memory...
Done (t=0.01s)
creating index...
index created!
2.0000 - loss: 0.7299 - rpn_class_loss: 0.0012 - rpn_bbox_loss: 0.0786 -
mrcnn_class_loss: 0.0318 - mrcnn_bbox_loss: 0.3856 - mrcnn_mask_loss:
0.2328loading annotations into memory...
Done (t=0.01s)
creating index...
index created!
loading annotations into memory...
Done (t=0.01s)
creating index...
index created!
2.0000 - loss: 0.7254 - rpn_class_loss: 0.0012 - rpn_bbox_loss: 0.0781 -
mrcnn_class_loss: 0.0315 - mrcnn_bbox_loss: 0.3829 - mrcnn_mask_loss:
0.2317loading annotations into memory...
Done (t=0.01s)
creating index...
index created!
loading annotations into memory...
Done (t=0.01s)
creating index...
index created!
2.0000 - loss: 0.7193 - rpn_class_loss: 0.0012 - rpn_bbox_loss: 0.0774 -
mrcnn_class_loss: 0.0311 - mrcnn_bbox_loss: 0.3793 - mrcnn_mask_loss:
0.2302loading annotations into memory...
Done (t=0.01s)
creating index...
index created!
loading annotations into memory...
Done (t=0.00s)
```

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creating index...
index created!
2.0000 - loss: 0.7133 - rpn_class_loss: 0.0012 - rpn_bbox_loss: 0.0768 -
mrcnn class loss: 0.0307 - mrcnn bbox loss: 0.3758 - mrcnn mask loss:
0.2287loading annotations into memory...
Done (t=0.01s)
creating index...
index created!
loading annotations into memory...
Done (t=0.01s)
creating index...
index created!
2.0000 - loss: 0.7059 - rpn_class_loss: 0.0012 - rpn_bbox_loss: 0.0761 -
mrcnn_class_loss: 0.0303 - mrcnn_bbox_loss: 0.3712 - mrcnn_mask_loss:
0.22711oading annotations into memory...
Done (t=0.01s)
creating index...
index created!
loading annotations into memory...
Done (t=0.01s)
creating index...
index created!
2.0000 - loss: 0.6993 - rpn_class_loss: 0.0012 - rpn_bbox_loss: 0.0755 -
mrcnn_class_loss: 0.0299 - mrcnn_bbox_loss: 0.3672 - mrcnn_mask_loss:
0.2256loading annotations into memory...
Done (t=0.01s)
creating index...
index created!
loading annotations into memory...
Done (t=0.01s)
creating index...
index created!
2.0000 - loss: 0.7004 - rpn_class_loss: 0.0012 - rpn_bbox_loss: 0.0778 -
mrcnn_class_loss: 0.0295 - mrcnn_bbox_loss: 0.3675 - mrcnn_mask_loss:
0.2243loading annotations into memory...
Done (t=0.01s)
creating index...
index created!
loading annotations into memory...
Done (t=0.01s)
creating index...
index created!
2.0000 - loss: 0.6958 - rpn_class_loss: 0.0012 - rpn_bbox_loss: 0.0775 -
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mrcnn_class_loss: 0.0292 - mrcnn_bbox_loss: 0.3643 - mrcnn_mask_loss:
0.2238loading annotations into memory...
Done (t=0.01s)
creating index...
index created!
loading annotations into memory...
Done (t=0.01s)
creating index...
index created!
2.0000 - loss: 0.6908 - rpn_class_loss: 0.0012 - rpn_bbox_loss: 0.0768 -
mrcnn_class_loss: 0.0289 - mrcnn_bbox_loss: 0.3611 - mrcnn_mask_loss:
0.2228loading annotations into memory...
Done (t=0.01s)
creating index...
index created!
loading annotations into memory...
Done (t=0.01s)
creating index...
index created!
2.0000 - loss: 0.6846 - rpn_class_loss: 0.0012 - rpn_bbox_loss: 0.0764 -
mrcnn_class_loss: 0.0285 - mrcnn_bbox_loss: 0.3569 - mrcnn_mask_loss:
0.2217loading annotations into memory...
Done (t=0.01s)
creating index...
index created!
loading annotations into memory...
Done (t=0.01s)
creating index...
index created!
2.0000 - loss: 0.6783 - rpn_class_loss: 0.0012 - rpn_bbox_loss: 0.0757 -
mrcnn_class_loss: 0.0282 - mrcnn_bbox_loss: 0.3527 - mrcnn_mask_loss:
0.2205loading annotations into memory...
Done (t=0.01s)
creating index...
index created!
loading annotations into memory...
Done (t=0.01s)
creating index...
index created!
2.0000 - loss: 0.6731 - rpn_class_loss: 0.0013 - rpn_bbox_loss: 0.0752 -
mrcnn_class_loss: 0.0280 - mrcnn_bbox_loss: 0.3493 - mrcnn_mask_loss:
0.2193loading annotations into memory...
Done (t=0.01s)
creating index...
```

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index created!
loading annotations into memory...
Done (t=0.01s)
creating index...
index created!
2.0000 - loss: 0.6683 - rpn class loss: 0.0013 - rpn bbox loss: 0.0745 -
mrcnn_class_loss: 0.0278 - mrcnn_bbox_loss: 0.3462 - mrcnn_mask_loss:
0.2184loading annotations into memory...
Done (t=0.01s)
creating index...
index created!
loading annotations into memory...
Done (t=0.01s)
creating index...
index created!
2.0000 - loss: 0.6638 - rpn_class_loss: 0.0013 - rpn_bbox_loss: 0.0742 -
mrcnn_class_loss: 0.0275 - mrcnn_bbox_loss: 0.3440 - mrcnn_mask_loss:
0.2169loading annotations into memory...
Done (t=0.01s)
creating index...
index created!
loading annotations into memory...
Done (t=0.01s)
creating index...
index created!
2.0000 - loss: 0.6658 - rpn_class_loss: 0.0013 - rpn_bbox_loss: 0.0746 -
mrcnn_class_loss: 0.0274 - mrcnn_bbox_loss: 0.3423 - mrcnn_mask_loss:
0.22011 oading annotations into memory...
Done (t=0.01s)
creating index...
index created!
loading annotations into memory...
Done (t=0.01s)
creating index...
index created!
2.0000 - loss: 0.6633 - rpn_class_loss: 0.0013 - rpn_bbox_loss: 0.0746 -
mrcnn_class_loss: 0.0274 - mrcnn_bbox_loss: 0.3399 - mrcnn_mask_loss:
0.2202loading annotations into memory...
Done (t=0.01s)
creating index...
index created!
loading annotations into memory...
Done (t=0.01s)
creating index...
```

```
index created!
2.0000 - loss: 0.6594 - rpn_class_loss: 0.0013 - rpn_bbox_loss: 0.0740 -
mrcnn_class_loss: 0.0271 - mrcnn_bbox_loss: 0.3380 - mrcnn_mask_loss:
0.2190loading annotations into memory...
Done (t=0.01s)
creating index...
index created!
loading annotations into memory...
Done (t=0.01s)
creating index...
index created!
2.0000 - loss: 0.6556 - rpn_class_loss: 0.0013 - rpn_bbox_loss: 0.0738 -
mrcnn_class_loss: 0.0270 - mrcnn_bbox_loss: 0.3353 - mrcnn_mask_loss:
0.2182loading annotations into memory...
Done (t=0.01s)
creating index...
index created!
loading annotations into memory...
Done (t=0.01s)
creating index...
index created!
2.0000 - loss: 0.6517 - rpn_class_loss: 0.0013 - rpn_bbox_loss: 0.0738 -
mrcnn_class_loss: 0.0268 - mrcnn_bbox_loss: 0.3327 - mrcnn_mask_loss:
0.2172loading annotations into memory...
Done (t=0.01s)
creating index...
index created!
loading annotations into memory...
Done (t=0.01s)
creating index...
index created!
2.0000 - loss: 0.6496 - rpn_class_loss: 0.0013 - rpn_bbox_loss: 0.0746 -
mrcnn_class_loss: 0.0266 - mrcnn_bbox_loss: 0.3309 - mrcnn_mask_loss:
0.2162loading annotations into memory...
Done (t=0.01s)
creating index...
index created!
loading annotations into memory...
Done (t=0.01s)
creating index...
index created!
2.0000 - loss: 0.6453 - rpn_class_loss: 0.0013 - rpn_bbox_loss: 0.0743 -
mrcnn_class_loss: 0.0264 - mrcnn_bbox_loss: 0.3280 - mrcnn_mask_loss:
```

```
0.2154loading annotations into memory...
Done (t=0.01s)
creating index...
index created!
loading annotations into memory...
Done (t=0.01s)
creating index...
index created!
2.0000 - loss: 0.6427 - rpn_class_loss: 0.0013 - rpn_bbox_loss: 0.0741 -
mrcnn_class loss: 0.0263 - mrcnn bbox_loss: 0.3266 - mrcnn_mask loss:
0.2144loading annotations into memory...
Done (t=0.01s)
creating index...
index created!
loading annotations into memory...
Done (t=0.01s)
creating index...
index created!
2.0000 - loss: 0.6416 - rpn_class_loss: 0.0013 - rpn_bbox_loss: 0.0743 -
mrcnn class loss: 0.0261 - mrcnn bbox loss: 0.3253 - mrcnn mask loss:
0.2146loading annotations into memory...
Done (t=0.01s)
creating index...
index created!
loading annotations into memory...
Done (t=0.01s)
creating index...
index created!
2.0000 - loss: 0.6385 - rpn_class_loss: 0.0012 - rpn_bbox_loss: 0.0743 -
mrcnn_class loss: 0.0261 - mrcnn_bbox_loss: 0.3232 - mrcnn_mask_loss: 0.2137
loading annotations into memory...
Done (t=0.01s)
creating index...
index created!
loading annotations into memory...
Done (t=0.00s)
creating index...
index created!
2.0000 - loss: 0.6358 - rpn_class_loss: 0.0012 - rpn_bbox_loss: 0.0745 -
mrcnn_class_loss: 0.0261 - mrcnn_bbox_loss: 0.3211 - mrcnn_mask_loss:
0.2129loading annotations into memory...
Done (t=0.01s)
creating index...
index created!
```

```
loading annotations into memory...
Done (t=0.01s)
creating index...
index created!
2.0000 - loss: 0.6321 - rpn_class_loss: 0.0012 - rpn_bbox_loss: 0.0749 -
mrcnn_class_loss: 0.0260 - mrcnn_bbox_loss: 0.3183 - mrcnn_mask_loss:
0.2118loading annotations into memory...
Done (t=0.02s)
creating index...
index created!
loading annotations into memory...
Done (t=0.01s)
creating index...
index created!
2.0000 - loss: 0.6281 - rpn_class_loss: 0.0012 - rpn_bbox_loss: 0.0743 -
mrcnn_class_loss: 0.0262 - mrcnn_bbox_loss: 0.3157 - mrcnn_mask_loss:
0.2106loading annotations into memory...
Done (t=0.01s)
creating index...
index created!
loading annotations into memory...
Done (t=0.01s)
creating index...
index created!
2.0000 - loss: 0.6237 - rpn_class_loss: 0.0012 - rpn_bbox_loss: 0.0738 -
mrcnn_class_loss: 0.0263 - mrcnn_bbox_loss: 0.3131 - mrcnn_mask_loss:
0.2094loading annotations into memory...
Done (t=0.01s)
creating index...
index created!
loading annotations into memory...
Done (t=0.01s)
creating index...
index created!
2.0000 - loss: 0.6199 - rpn_class_loss: 0.0012 - rpn_bbox_loss: 0.0734 -
mrcnn_class_loss: 0.0262 - mrcnn_bbox_loss: 0.3105 - mrcnn_mask_loss:
0.2086loading annotations into memory...
Done (t=0.01s)
creating index...
index created!
loading annotations into memory...
Done (t=0.01s)
creating index...
index created!
```

```
2.0000 - loss: 0.6161 - rpn_class_loss: 0.0012 - rpn_bbox_loss: 0.0731 -
mrcnn_class_loss: 0.0260 - mrcnn_bbox_loss: 0.3079 - mrcnn_mask_loss:
0.2078loading annotations into memory...
Done (t=0.01s)
creating index...
index created!
loading annotations into memory...
Done (t=0.01s)
creating index...
index created!
2.0000 - loss: 0.6121 - rpn_class_loss: 0.0012 - rpn_bbox_loss: 0.0727 -
mrcnn_class_loss: 0.0259 - mrcnn_bbox_loss: 0.3054 - mrcnn_mask_loss:
0.2070loading annotations into memory...
Done (t=0.01s)
creating index...
index created!
loading annotations into memory...
Done (t=0.01s)
creating index...
index created!
2.0000 - loss: 0.6083 - rpn_class_loss: 0.0012 - rpn_bbox_loss: 0.0723 -
mrcnn_class_loss: 0.0258 - mrcnn_bbox_loss: 0.3027 - mrcnn_mask_loss:
0.2063loading annotations into memory...
Done (t=0.01s)
creating index...
index created!
loading annotations into memory...
Done (t=0.01s)
creating index...
index created!
2.0000 - loss: 0.6052 - rpn class loss: 0.0012 - rpn bbox loss: 0.0721 -
mrcnn_class_loss: 0.0257 - mrcnn_bbox_loss: 0.3007 - mrcnn_mask_loss:
0.2055loading annotations into memory...
Done (t=0.01s)
creating index...
index created!
loading annotations into memory...
Done (t=0.01s)
creating index...
index created!
2.0000 - loss: 0.6071 - rpn_class_loss: 0.0013 - rpn_bbox_loss: 0.0742 -
mrcnn_class_loss: 0.0256 - mrcnn_bbox_loss: 0.3002 - mrcnn_mask_loss:
0.2058loading annotations into memory...
```

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Done (t=0.01s)
creating index...
index created!
loading annotations into memory...
Done (t=0.01s)
creating index...
index created!
2.0000 - loss: 0.6036 - rpn_class_loss: 0.0013 - rpn_bbox_loss: 0.0738 -
mrcnn_class_loss: 0.0255 - mrcnn_bbox_loss: 0.2982 - mrcnn_mask_loss:
0.2048loading annotations into memory...
Done (t=0.01s)
creating index...
index created!
loading annotations into memory...
Done (t=0.01s)
creating index...
index created!
2.0000 - loss: 0.6005 - rpn_class_loss: 0.0013 - rpn_bbox_loss: 0.0734 -
mrcnn_class_loss: 0.0253 - mrcnn_bbox_loss: 0.2966 - mrcnn_mask_loss:
0.2037loading annotations into memory...
Done (t=0.01s)
creating index...
index created!
loading annotations into memory...
Done (t=0.01s)
creating index...
index created!
100/100 [============= ] - ETA: Os - batch: 49.5000 - size:
2.0000 - loss: 0.5979 - rpn_class_loss: 0.0013 - rpn_bbox_loss: 0.0732 -
mrcnn_class_loss: 0.0252 - mrcnn_bbox_loss: 0.2954 - mrcnn_mask_loss:
0.2027loading annotations into memory...
Done (t=0.00s)
creating index...
index created!
loading annotations into memory...
Done (t=0.00s)
creating index...
index created!
/usr/local/lib/python3.10/dist-packages/keras/src/engine/training_v1.py:2335:
UserWarning: `Model.state_updates` will be removed in a future version. This
property should not be used in TensorFlow 2.0, as `updates` are applied
automatically.
 updates = self.state_updates
Le flux de sortie a été tronqué et ne contient que les 5000 dernièreslignes.
```

creating index...

index created!

loading annotations into memory...

Done (t=0.00s)

creating index...

index created!

loading annotations into memory...

Done (t=0.00s)

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Done (t=0.00s)
creating index...
index created!
loading annotations into memory...
Done (t=0.00s)
creating index...
index created!
2.0000 - loss: 0.2061 - rpn_class_loss: 0.0012 - rpn_bbox_loss: 0.0462 -
```

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mrcnn_class_loss: 0.0058 - mrcnn_bbox_loss: 0.0474 - mrcnn_mask_loss: 0.1055 -
val_loss: 0.8100 - val_rpn_class_loss: 0.0186 - val_rpn_bbox_loss: 0.4843 -
val_mrcnn_class_loss: 0.0065 - val_mrcnn_bbox_loss: 0.1043 -
val_mrcnn_mask_loss: 0.1963
Epoch 7/10
loading annotations into memory...
Done (t=0.01s)
creating index...
index created!
loading annotations into memory...
Done (t=0.01s)
creating index...
index created!
  1/100 [...] - ETA: 1:36 - batch: 0.0000e+00 - size:
2.0000 - loss: 0.2176 - rpn_class_loss: 0.0015 - rpn_bbox_loss: 0.0812 -
mrcnn_class_loss: 2.2043e-04 - mrcnn_bbox_loss: 0.0329 - mrcnn_mask_loss:
0.1018loading annotations into memory...
Done (t=0.01s)
creating index...
index created!
loading annotations into memory...
Done (t=0.01s)
creating index...
index created!
  2/100 [...] - ETA: 1:28 - batch: 0.5000 - size:
2.0000 - loss: 0.1942 - rpn_class_loss: 0.0014 - rpn_bbox_loss: 0.0677 -
mrcnn_class_loss: 4.0776e-04 - mrcnn_bbox_loss: 0.0255 - mrcnn_mask_loss: 0.0993
loading annotations into memory...
Done (t=0.01s)
creating index...
index created!
loading annotations into memory...
Done (t=0.02s)
creating index...
index created!
  3/100 [...] - ETA: 1:25 - batch: 1.0000 - size:
2.0000 - loss: 0.2197 - rpn class loss: 0.0013 - rpn bbox loss: 0.0637 -
mrcnn_class_loss: 0.0018 - mrcnn_bbox_loss: 0.0407 - mrcnn_mask_loss: 0.1122
loading annotations into memory...
Done (t=0.01s)
creating index...
index created!
loading annotations into memory...
Done (t=0.01s)
creating index...
index created!
  4/100 [>...] - ETA: 1:24 - batch: 1.5000 - size:
2.0000 - loss: 0.2211 - rpn_class_loss: 0.0018 - rpn_bbox_loss: 0.0655 -
```

```
mrcnn_class_loss: 0.0021 - mrcnn_bbox_loss: 0.0373 - mrcnn_mask_loss:
0.1144loading annotations into memory...
Done (t=0.01s)
creating index...
index created!
loading annotations into memory...
Done (t=0.01s)
creating index...
index created!
  5/100 [>...] - ETA: 1:19 - batch: 2.0000 - size:
2.0000 - loss: 0.2158 - rpn_class_loss: 0.0019 - rpn_bbox_loss: 0.0613 -
mrcnn_class_loss: 0.0018 - mrcnn_bbox_loss: 0.0377 - mrcnn_mask_loss:
0.1131loading annotations into memory...
Done (t=0.01s)
creating index...
index created!
loading annotations into memory...
Done (t=0.01s)
creating index...
index created!
  6/100 [>...] - ETA: 1:16 - batch: 2.5000 - size:
2.0000 - loss: 0.2140 - rpn_class_loss: 0.0018 - rpn_bbox_loss: 0.0642 -
mrcnn_class_loss: 0.0021 - mrcnn_bbox_loss: 0.0368 - mrcnn_mask_loss:
0.1092loading annotations into memory...
Done (t=0.01s)
creating index...
index created!
loading annotations into memory...
Done (t=0.01s)
creating index...
index created!
  7/100 [=>...] - ETA: 1:13 - batch: 3.0000 - size:
2.0000 - loss: 0.2050 - rpn_class_loss: 0.0018 - rpn_bbox_loss: 0.0612 -
mrcnn_class_loss: 0.0021 - mrcnn_bbox_loss: 0.0323 - mrcnn_mask_loss:
0.1076loading annotations into memory...
Done (t=0.01s)
creating index...
index created!
loading annotations into memory...
Done (t=0.01s)
creating index...
index created!
  8/100 [=>...] - ETA: 1:12 - batch: 3.5000 - size:
2.0000 - loss: 0.1991 - rpn_class_loss: 0.0018 - rpn_bbox_loss: 0.0582 -
mrcnn_class_loss: 0.0022 - mrcnn_bbox_loss: 0.0314 - mrcnn_mask_loss:
0.1055loading annotations into memory...
Done (t=0.01s)
creating index...
```

```
index created!
loading annotations into memory...
Done (t=0.01s)
creating index...
index created!
  9/100 [=>...] - ETA: 1:10 - batch: 4.0000 - size:
2.0000 - loss: 0.2045 - rpn class loss: 0.0017 - rpn bbox loss: 0.0569 -
mrcnn_class_loss: 0.0024 - mrcnn_bbox_loss: 0.0364 - mrcnn_mask_loss:
0.1071loading annotations into memory...
Done (t=0.01s)
creating index...
index created!
loading annotations into memory...
Done (t=0.01s)
creating index...
index created!
10/100 [==>...] - ETA: 1:08 - batch: 4.5000 - size:
2.0000 - loss: 0.2049 - rpn_class_loss: 0.0016 - rpn_bbox_loss: 0.0587 -
mrcnn_class_loss: 0.0022 - mrcnn_bbox_loss: 0.0352 - mrcnn_mask_loss:
0.1071loading annotations into memory...
Done (t=0.01s)
creating index...
index created!
loading annotations into memory...
Done (t=0.01s)
creating index...
index created!
11/100 [==>...] - ETA: 1:07 - batch: 5.0000 - size:
2.0000 - loss: 0.2053 - rpn_class_loss: 0.0017 - rpn_bbox_loss: 0.0586 -
mrcnn_class_loss: 0.0028 - mrcnn_bbox_loss: 0.0358 - mrcnn_mask_loss:
0.1065loading annotations into memory...
Done (t=0.01s)
creating index...
index created!
loading annotations into memory...
Done (t=0.01s)
creating index...
index created!
12/100 [==>...] - ETA: 1:06 - batch: 5.5000 - size:
2.0000 - loss: 0.1996 - rpn_class_loss: 0.0016 - rpn_bbox_loss: 0.0562 -
mrcnn_class_loss: 0.0029 - mrcnn_bbox_loss: 0.0350 - mrcnn_mask_loss:
0.1039loading annotations into memory...
Done (t=0.01s)
creating index...
index created!
loading annotations into memory...
Done (t=0.01s)
creating index...
```

```
index created!
 13/100 [==>...] - ETA: 1:05 - batch: 6.0000 - size:
2.0000 - loss: 0.1962 - rpn_class_loss: 0.0015 - rpn_bbox_loss: 0.0539 -
mrcnn_class_loss: 0.0028 - mrcnn_bbox_loss: 0.0349 - mrcnn_mask_loss:
0.1032loading annotations into memory...
Done (t=0.02s)
creating index...
index created!
loading annotations into memory...
Done (t=0.01s)
creating index...
index created!
14/100 [===>...] - ETA: 1:04 - batch: 6.5000 - size:
2.0000 - loss: 0.1926 - rpn_class_loss: 0.0014 - rpn_bbox_loss: 0.0522 -
mrcnn_class_loss: 0.0028 - mrcnn_bbox_loss: 0.0338 - mrcnn_mask_loss:
0.1023loading annotations into memory...
Done (t=0.01s)
creating index...
index created!
loading annotations into memory...
Done (t=0.01s)
creating index...
index created!
15/100 [===>...] - ETA: 1:03 - batch: 7.0000 - size:
2.0000 - loss: 0.1966 - rpn_class_loss: 0.0013 - rpn_bbox_loss: 0.0514 -
mrcnn_class_loss: 0.0027 - mrcnn_bbox_loss: 0.0337 - mrcnn_mask_loss:
0.1075loading annotations into memory...
Done (t=0.01s)
creating index...
index created!
loading annotations into memory...
Done (t=0.01s)
creating index...
index created!
16/100 [===>...] - ETA: 1:02 - batch: 7.5000 - size:
2.0000 - loss: 0.1946 - rpn_class_loss: 0.0013 - rpn_bbox_loss: 0.0506 -
mrcnn_class_loss: 0.0028 - mrcnn_bbox_loss: 0.0336 - mrcnn_mask_loss:
0.1063loading annotations into memory...
Done (t=0.01s)
creating index...
index created!
loading annotations into memory...
Done (t=0.01s)
creating index...
index created!
17/100 [====>...] - ETA: 1:01 - batch: 8.0000 - size:
2.0000 - loss: 0.1912 - rpn_class_loss: 0.0012 - rpn_bbox_loss: 0.0485 -
mrcnn_class_loss: 0.0033 - mrcnn_bbox_loss: 0.0328 - mrcnn_mask_loss:
```

```
0.1053loading annotations into memory...
Done (t=0.01s)
creating index...
index created!
loading annotations into memory...
Done (t=0.01s)
creating index...
index created!
18/100 [====>...] - ETA: 1:00 - batch: 8.5000 - size:
2.0000 - loss: 0.1885 - rpn_class_loss: 0.0012 - rpn_bbox_loss: 0.0480 -
mrcnn_class loss: 0.0033 - mrcnn_bbox_loss: 0.0324 - mrcnn_mask loss:
0.1037loading annotations into memory...
Done (t=0.01s)
creating index...
index created!
loading annotations into memory...
Done (t=0.01s)
creating index...
index created!
19/100 [====>...] - ETA: 1:00 - batch: 9.0000 - size:
2.0000 - loss: 0.1886 - rpn class loss: 0.0013 - rpn bbox loss: 0.0473 -
mrcnn_class_loss: 0.0033 - mrcnn_bbox_loss: 0.0315 - mrcnn_mask_loss:
0.1052loading annotations into memory...
Done (t=0.01s)
creating index...
index created!
loading annotations into memory...
Done (t=0.01s)
creating index...
index created!
20/100 [====>...] - ETA: 1:00 - batch: 9.5000 - size:
2.0000 - loss: 0.1853 - rpn_class_loss: 0.0013 - rpn_bbox_loss: 0.0459 -
mrcnn_class_loss: 0.0034 - mrcnn_bbox_loss: 0.0309 - mrcnn_mask_loss:
0.1039loading annotations into memory...
Done (t=0.01s)
creating index...
index created!
loading annotations into memory...
Done (t=0.01s)
creating index...
index created!
21/100 [====>...] - ETA: 1:00 - batch: 10.0000 - size:
2.0000 - loss: 0.1887 - rpn_class_loss: 0.0012 - rpn_bbox_loss: 0.0470 -
mrcnn_class_loss: 0.0034 - mrcnn_bbox_loss: 0.0310 - mrcnn_mask_loss:
0.1060loading annotations into memory...
Done (t=0.01s)
creating index...
index created!
```

```
loading annotations into memory...
Done (t=0.01s)
creating index...
index created!
22/100 [====>...] - ETA: 59s - batch: 10.5000 - size:
2.0000 - loss: 0.1892 - rpn_class_loss: 0.0014 - rpn_bbox_loss: 0.0475 -
mrcnn class loss: 0.0035 - mrcnn bbox loss: 0.0307 - mrcnn mask loss: 0.1061
loading annotations into memory...
Done (t=0.01s)
creating index...
index created!
loading annotations into memory...
Done (t=0.01s)
creating index...
index created!
23/100 [====>...] - ETA: 59s - batch: 11.0000 - size:
2.0000 - loss: 0.1869 - rpn_class_loss: 0.0014 - rpn_bbox_loss: 0.0467 -
mrcnn_class_loss: 0.0036 - mrcnn_bbox_loss: 0.0302 - mrcnn_mask_loss:
0.1049loading annotations into memory...
Done (t=0.01s)
creating index...
index created!
loading annotations into memory...
Done (t=0.01s)
creating index...
index created!
24/100 [=====>...] - ETA: 58s - batch: 11.5000 - size:
2.0000 - loss: 0.1847 - rpn_class_loss: 0.0014 - rpn_bbox_loss: 0.0455 -
mrcnn_class_loss: 0.0036 - mrcnn_bbox_loss: 0.0293 - mrcnn_mask_loss:
0.1050loading annotations into memory...
Done (t=0.01s)
creating index...
index created!
loading annotations into memory...
Done (t=0.01s)
creating index...
index created!
25/100 [=====>...] - ETA: 57s - batch: 12.0000 - size:
2.0000 - loss: 0.1827 - rpn_class_loss: 0.0013 - rpn_bbox_loss: 0.0447 -
mrcnn_class_loss: 0.0035 - mrcnn_bbox_loss: 0.0291 - mrcnn_mask_loss:
0.1040loading annotations into memory...
Done (t=0.01s)
creating index...
index created!
loading annotations into memory...
Done (t=0.01s)
creating index...
index created!
```

```
26/100 [=====>...] - ETA: 56s - batch: 12.5000 - size:
2.0000 - loss: 0.1814 - rpn_class_loss: 0.0015 - rpn_bbox_loss: 0.0438 -
mrcnn_class_loss: 0.0036 - mrcnn_bbox_loss: 0.0290 - mrcnn_mask_loss:
0.1035loading annotations into memory...
Done (t=0.01s)
creating index...
index created!
loading annotations into memory...
Done (t=0.01s)
creating index...
index created!
27/100 [======>...] - ETA: 55s - batch: 13.0000 - size:
2.0000 - loss: 0.1821 - rpn_class_loss: 0.0015 - rpn_bbox_loss: 0.0431 -
mrcnn_class_loss: 0.0036 - mrcnn_bbox_loss: 0.0288 - mrcnn_mask_loss:
0.1051loading annotations into memory...
Done (t=0.01s)
creating index...
index created!
loading annotations into memory...
Done (t=0.01s)
creating index...
index created!
28/100 [======>...] - ETA: 54s - batch: 13.5000 - size:
2.0000 - loss: 0.1825 - rpn_class_loss: 0.0015 - rpn_bbox_loss: 0.0429 -
mrcnn_class_loss: 0.0037 - mrcnn_bbox_loss: 0.0297 - mrcnn_mask_loss:
0.1047loading annotations into memory...
Done (t=0.01s)
creating index...
index created!
loading annotations into memory...
Done (t=0.01s)
creating index...
index created!
29/100 [======>...] - ETA: 53s - batch: 14.0000 - size:
2.0000 - loss: 0.1816 - rpn class loss: 0.0014 - rpn bbox loss: 0.0426 -
mrcnn_class_loss: 0.0036 - mrcnn_bbox_loss: 0.0292 - mrcnn_mask_loss:
0.1047loading annotations into memory...
Done (t=0.01s)
creating index...
index created!
loading annotations into memory...
Done (t=0.01s)
creating index...
index created!
30/100 [======>...] - ETA: 52s - batch: 14.5000 - size:
2.0000 - loss: 0.1799 - rpn_class_loss: 0.0014 - rpn_bbox_loss: 0.0418 -
mrcnn_class_loss: 0.0037 - mrcnn_bbox_loss: 0.0289 - mrcnn_mask_loss:
0.1041loading annotations into memory...
```

```
Done (t=0.01s)
creating index...
index created!
loading annotations into memory...
Done (t=0.01s)
creating index...
index created!
31/100 [======>...] - ETA: 52s - batch: 15.0000 - size:
2.0000 - loss: 0.1836 - rpn_class_loss: 0.0014 - rpn_bbox_loss: 0.0417 -
mrcnn_class_loss: 0.0037 - mrcnn_bbox_loss: 0.0310 - mrcnn_mask_loss:
0.1058loading annotations into memory...
Done (t=0.01s)
creating index...
index created!
loading annotations into memory...
Done (t=0.01s)
creating index...
index created!
32/100 [======>...] - ETA: 51s - batch: 15.5000 - size:
2.0000 - loss: 0.1829 - rpn_class_loss: 0.0014 - rpn_bbox_loss: 0.0412 -
mrcnn_class_loss: 0.0036 - mrcnn_bbox_loss: 0.0318 - mrcnn_mask_loss:
0.1049loading annotations into memory...
Done (t=0.01s)
creating index...
index created!
loading annotations into memory...
Done (t=0.01s)
creating index...
index created!
33/100 [======>...] - ETA: 50s - batch: 16.0000 - size:
2.0000 - loss: 0.1820 - rpn_class_loss: 0.0014 - rpn_bbox_loss: 0.0409 -
mrcnn_class_loss: 0.0036 - mrcnn_bbox_loss: 0.0315 - mrcnn_mask_loss:
0.1046loading annotations into memory...
Done (t=0.01s)
creating index...
index created!
loading annotations into memory...
Done (t=0.01s)
creating index...
index created!
34/100 [======>...] - ETA: 49s - batch: 16.5000 - size:
2.0000 - loss: 0.1828 - rpn_class_loss: 0.0013 - rpn_bbox_loss: 0.0418 -
mrcnn_class_loss: 0.0036 - mrcnn_bbox_loss: 0.0316 - mrcnn_mask_loss:
0.1045loading annotations into memory...
Done (t=0.01s)
creating index...
index created!
loading annotations into memory...
```

```
Done (t=0.01s)
creating index...
index created!
35/100 [======>...] - ETA: 48s - batch: 17.0000 - size:
2.0000 - loss: 0.1879 - rpn class loss: 0.0013 - rpn bbox loss: 0.0436 -
mrcnn_class_loss: 0.0039 - mrcnn_bbox_loss: 0.0345 - mrcnn_mask_loss:
0.1046loading annotations into memory...
Done (t=0.01s)
creating index...
index created!
loading annotations into memory...
Done (t=0.01s)
creating index...
index created!
36/100 [======>...] - ETA: 47s - batch: 17.5000 - size:
2.0000 - loss: 0.1868 - rpn_class_loss: 0.0013 - rpn_bbox_loss: 0.0431 -
mrcnn_class_loss: 0.0039 - mrcnn_bbox_loss: 0.0344 - mrcnn_mask_loss:
0.1042loading annotations into memory...
Done (t=0.01s)
creating index...
index created!
loading annotations into memory...
Done (t=0.01s)
creating index...
index created!
37/100 [========>...] - ETA: 47s - batch: 18.0000 - size:
2.0000 - loss: 0.1865 - rpn_class_loss: 0.0013 - rpn_bbox_loss: 0.0428 -
mrcnn_class_loss: 0.0038 - mrcnn_bbox_loss: 0.0341 - mrcnn_mask_loss:
0.1046loading annotations into memory...
Done (t=0.01s)
creating index...
index created!
loading annotations into memory...
Done (t=0.01s)
creating index...
index created!
38/100 [========>...] - ETA: 46s - batch: 18.5000 - size:
2.0000 - loss: 0.1861 - rpn_class_loss: 0.0013 - rpn_bbox_loss: 0.0425 -
mrcnn_class_loss: 0.0038 - mrcnn_bbox_loss: 0.0340 - mrcnn_mask_loss:
0.1046loading annotations into memory...
Done (t=0.01s)
creating index...
index created!
loading annotations into memory...
Done (t=0.01s)
creating index...
index created!
39/100 [========>...] - ETA: 46s - batch: 19.0000 - size:
```

```
2.0000 - loss: 0.1858 - rpn_class_loss: 0.0013 - rpn_bbox_loss: 0.0421 -
mrcnn_class_loss: 0.0038 - mrcnn_bbox_loss: 0.0342 - mrcnn_mask_loss:
0.1045loading annotations into memory...
Done (t=0.01s)
creating index...
index created!
loading annotations into memory...
Done (t=0.01s)
creating index...
index created!
40/100 [======>...] - ETA: 45s - batch: 19.5000 - size:
2.0000 - loss: 0.1856 - rpn_class_loss: 0.0013 - rpn_bbox_loss: 0.0417 -
mrcnn_class_loss: 0.0038 - mrcnn_bbox_loss: 0.0345 - mrcnn_mask_loss:
0.1044loading annotations into memory...
Done (t=0.02s)
creating index...
index created!
loading annotations into memory...
Done (t=0.01s)
creating index...
index created!
41/100 [========>...] - ETA: 44s - batch: 20.0000 - size:
2.0000 - loss: 0.1859 - rpn_class_loss: 0.0013 - rpn_bbox_loss: 0.0414 -
mrcnn_class_loss: 0.0038 - mrcnn_bbox_loss: 0.0344 - mrcnn_mask_loss:
0.1050loading annotations into memory...
Done (t=0.01s)
creating index...
index created!
loading annotations into memory...
Done (t=0.01s)
creating index...
index created!
42/100 [========>...] - ETA: 44s - batch: 20.5000 - size:
2.0000 - loss: 0.1864 - rpn_class_loss: 0.0013 - rpn_bbox_loss: 0.0415 -
mrcnn class loss: 0.0038 - mrcnn bbox loss: 0.0344 - mrcnn mask loss:
0.1054loading annotations into memory...
Done (t=0.01s)
creating index...
index created!
loading annotations into memory...
Done (t=0.01s)
creating index...
index created!
43/100 [========>...] - ETA: 43s - batch: 21.0000 - size:
2.0000 - loss: 0.1858 - rpn_class_loss: 0.0012 - rpn_bbox_loss: 0.0412 -
mrcnn_class_loss: 0.0038 - mrcnn_bbox_loss: 0.0341 - mrcnn_mask_loss:
0.1055loading annotations into memory...
Done (t=0.01s)
```

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creating index...
index created!
loading annotations into memory...
Done (t=0.01s)
creating index...
index created!
2.0000 - loss: 0.1849 - rpn_class_loss: 0.0012 - rpn_bbox_loss: 0.0409 -
mrcnn_class_loss: 0.0037 - mrcnn_bbox_loss: 0.0336 - mrcnn_mask_loss:
0.1054loading annotations into memory...
Done (t=0.01s)
creating index...
index created!
loading annotations into memory...
Done (t=0.01s)
creating index...
index created!
45/100 [=========>...] - ETA: 41s - batch: 22.0000 - size:
2.0000 - loss: 0.1839 - rpn_class_loss: 0.0012 - rpn_bbox_loss: 0.0406 -
mrcnn_class_loss: 0.0037 - mrcnn_bbox_loss: 0.0334 - mrcnn_mask_loss:
0.1050loading annotations into memory...
Done (t=0.01s)
creating index...
index created!
loading annotations into memory...
Done (t=0.01s)
creating index...
index created!
46/100 [=========>...] - ETA: 40s - batch: 22.5000 - size:
2.0000 - loss: 0.1826 - rpn_class_loss: 0.0012 - rpn_bbox_loss: 0.0406 -
mrcnn_class_loss: 0.0037 - mrcnn_bbox_loss: 0.0329 - mrcnn_mask_loss:
0.1042loading annotations into memory...
Done (t=0.01s)
creating index...
index created!
loading annotations into memory...
Done (t=0.01s)
creating index...
index created!
47/100 [=========>...] - ETA: 39s - batch: 23.0000 - size:
2.0000 - loss: 0.1822 - rpn_class_loss: 0.0012 - rpn_bbox_loss: 0.0402 -
mrcnn_class_loss: 0.0037 - mrcnn_bbox_loss: 0.0330 - mrcnn_mask_loss:
0.1041loading annotations into memory...
Done (t=0.01s)
creating index...
index created!
loading annotations into memory...
Done (t=0.01s)
```

```
creating index...
index created!
2.0000 - loss: 0.1808 - rpn_class_loss: 0.0012 - rpn_bbox_loss: 0.0397 -
mrcnn class loss: 0.0037 - mrcnn bbox loss: 0.0325 - mrcnn mask loss:
0.1037loading annotations into memory...
Done (t=0.01s)
creating index...
index created!
loading annotations into memory...
Done (t=0.01s)
creating index...
index created!
49/100 [=========>...] - ETA: 38s - batch: 24.0000 - size:
2.0000 - loss: 0.1806 - rpn_class_loss: 0.0012 - rpn_bbox_loss: 0.0392 -
mrcnn_class_loss: 0.0036 - mrcnn_bbox_loss: 0.0324 - mrcnn_mask_loss:
0.1042loading annotations into memory...
Done (t=0.01s)
creating index...
index created!
loading annotations into memory...
Done (t=0.01s)
creating index...
index created!
2.0000 - loss: 0.1801 - rpn_class_loss: 0.0011 - rpn_bbox_loss: 0.0388 -
mrcnn_class_loss: 0.0036 - mrcnn_bbox_loss: 0.0318 - mrcnn_mask_loss:
0.1047loading annotations into memory...
Done (t=0.01s)
creating index...
index created!
loading annotations into memory...
Done (t=0.01s)
creating index...
index created!
2.0000 - loss: 0.1789 - rpn class loss: 0.0011 - rpn bbox loss: 0.0385 -
mrcnn_class_loss: 0.0035 - mrcnn_bbox_loss: 0.0315 - mrcnn_mask_loss:
0.1043loading annotations into memory...
Done (t=0.01s)
creating index...
index created!
loading annotations into memory...
Done (t=0.01s)
creating index...
index created!
2.0000 - loss: 0.1786 - rpn_class_loss: 0.0011 - rpn_bbox_loss: 0.0383 -
```

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mrcnn_class_loss: 0.0035 - mrcnn_bbox_loss: 0.0312 - mrcnn_mask_loss:
0.1045loading annotations into memory...
Done (t=0.01s)
creating index...
index created!
loading annotations into memory...
Done (t=0.01s)
creating index...
index created!
53/100 [=========>...] - ETA: 35s - batch: 26.0000 - size:
2.0000 - loss: 0.1786 - rpn_class_loss: 0.0011 - rpn_bbox_loss: 0.0379 -
mrcnn_class_loss: 0.0035 - mrcnn_bbox_loss: 0.0311 - mrcnn_mask_loss:
0.1051loading annotations into memory...
Done (t=0.01s)
creating index...
index created!
loading annotations into memory...
Done (t=0.01s)
creating index...
index created!
2.0000 - loss: 0.1793 - rpn_class_loss: 0.0011 - rpn_bbox_loss: 0.0379 -
mrcnn_class_loss: 0.0035 - mrcnn_bbox_loss: 0.0313 - mrcnn_mask_loss:
0.1055loading annotations into memory...
Done (t=0.01s)
creating index...
index created!
loading annotations into memory...
Done (t=0.01s)
creating index...
index created!
2.0000 - loss: 0.1784 - rpn_class_loss: 0.0011 - rpn_bbox_loss: 0.0376 -
mrcnn_class_loss: 0.0035 - mrcnn_bbox_loss: 0.0309 - mrcnn_mask_loss:
0.1053loading annotations into memory...
Done (t=0.01s)
creating index...
index created!
loading annotations into memory...
Done (t=0.01s)
creating index...
index created!
2.0000 - loss: 0.1786 - rpn_class_loss: 0.0011 - rpn_bbox_loss: 0.0385 -
mrcnn_class_loss: 0.0035 - mrcnn_bbox_loss: 0.0306 - mrcnn_mask_loss:
0.1049loading annotations into memory...
Done (t=0.01s)
creating index...
```

```
index created!
loading annotations into memory...
Done (t=0.01s)
creating index...
index created!
2.0000 - loss: 0.1784 - rpn class loss: 0.0010 - rpn bbox loss: 0.0385 -
mrcnn_class_loss: 0.0036 - mrcnn_bbox_loss: 0.0306 - mrcnn_mask_loss:
0.1048loading annotations into memory...
Done (t=0.01s)
creating index...
index created!
loading annotations into memory...
Done (t=0.01s)
creating index...
index created!
2.0000 - loss: 0.1777 - rpn_class_loss: 0.0010 - rpn_bbox_loss: 0.0382 -
mrcnn_class_loss: 0.0036 - mrcnn_bbox_loss: 0.0303 - mrcnn_mask_loss:
0.1046loading annotations into memory...
Done (t=0.01s)
creating index...
index created!
loading annotations into memory...
Done (t=0.01s)
creating index...
index created!
2.0000 - loss: 0.1771 - rpn_class_loss: 0.0010 - rpn_bbox_loss: 0.0380 -
mrcnn_class_loss: 0.0036 - mrcnn_bbox_loss: 0.0300 - mrcnn_mask_loss:
0.1045loading annotations into memory...
Done (t=0.01s)
creating index...
index created!
loading annotations into memory...
Done (t=0.01s)
creating index...
index created!
2.0000 - loss: 0.1770 - rpn_class_loss: 0.0011 - rpn_bbox_loss: 0.0381 -
mrcnn_class_loss: 0.0036 - mrcnn_bbox_loss: 0.0300 - mrcnn_mask_loss:
0.1043loading annotations into memory...
Done (t=0.01s)
creating index...
index created!
loading annotations into memory...
Done (t=0.01s)
creating index...
```

```
index created!
2.0000 - loss: 0.1775 - rpn_class_loss: 0.0010 - rpn_bbox_loss: 0.0381 -
mrcnn_class_loss: 0.0035 - mrcnn_bbox_loss: 0.0300 - mrcnn_mask_loss:
0.1048loading annotations into memory...
Done (t=0.01s)
creating index...
index created!
loading annotations into memory...
Done (t=0.01s)
creating index...
index created!
2.0000 - loss: 0.1765 - rpn_class_loss: 0.0010 - rpn_bbox_loss: 0.0378 -
mrcnn_class_loss: 0.0036 - mrcnn_bbox_loss: 0.0296 - mrcnn_mask_loss:
0.1045loading annotations into memory...
Done (t=0.01s)
creating index...
index created!
loading annotations into memory...
Done (t=0.01s)
creating index...
index created!
2.0000 - loss: 0.1757 - rpn_class_loss: 0.0011 - rpn_bbox_loss: 0.0376 -
mrcnn_class_loss: 0.0036 - mrcnn_bbox_loss: 0.0293 - mrcnn_mask_loss:
0.1042loading annotations into memory...
Done (t=0.01s)
creating index...
index created!
loading annotations into memory...
Done (t=0.01s)
creating index...
index created!
2.0000 - loss: 0.1751 - rpn_class_loss: 0.0011 - rpn_bbox_loss: 0.0374 -
mrcnn_class_loss: 0.0036 - mrcnn_bbox_loss: 0.0292 - mrcnn_mask_loss:
0.1039loading annotations into memory...
Done (t=0.01s)
creating index...
index created!
loading annotations into memory...
Done (t=0.01s)
creating index...
index created!
2.0000 - loss: 0.1784 - rpn_class_loss: 0.0011 - rpn_bbox_loss: 0.0387 -
mrcnn_class_loss: 0.0036 - mrcnn_bbox_loss: 0.0313 - mrcnn_mask_loss:
```

```
0.1037loading annotations into memory...
Done (t=0.01s)
creating index...
index created!
loading annotations into memory...
Done (t=0.01s)
creating index...
index created!
2.0000 - loss: 0.1778 - rpn_class_loss: 0.0010 - rpn_bbox_loss: 0.0387 -
mrcnn_class loss: 0.0036 - mrcnn bbox_loss: 0.0311 - mrcnn_mask loss:
0.1034loading annotations into memory...
Done (t=0.01s)
creating index...
index created!
loading annotations into memory...
Done (t=0.01s)
creating index...
index created!
2.0000 - loss: 0.1777 - rpn_class_loss: 0.0010 - rpn_bbox_loss: 0.0385 -
mrcnn_class_loss: 0.0036 - mrcnn_bbox_loss: 0.0313 - mrcnn_mask_loss:
0.1033loading annotations into memory...
Done (t=0.01s)
creating index...
index created!
loading annotations into memory...
Done (t=0.01s)
creating index...
index created!
2.0000 - loss: 0.1777 - rpn_class_loss: 0.0010 - rpn_bbox_loss: 0.0384 -
mrcnn_class_loss: 0.0035 - mrcnn_bbox_loss: 0.0315 - mrcnn_mask_loss:
0.1032loading annotations into memory...
Done (t=0.01s)
creating index...
index created!
loading annotations into memory...
Done (t=0.01s)
creating index...
index created!
2.0000 - loss: 0.1782 - rpn_class_loss: 0.0010 - rpn_bbox_loss: 0.0389 -
mrcnn_class_loss: 0.0035 - mrcnn_bbox_loss: 0.0318 - mrcnn_mask_loss:
0.1029loading annotations into memory...
Done (t=0.01s)
creating index...
index created!
```

```
loading annotations into memory...
Done (t=0.01s)
creating index...
index created!
2.0000 - loss: 0.1773 - rpn_class_loss: 0.0010 - rpn_bbox_loss: 0.0387 -
mrcnn class loss: 0.0035 - mrcnn bbox loss: 0.0316 - mrcnn mask loss:
0.1025loading annotations into memory...
Done (t=0.01s)
creating index...
index created!
loading annotations into memory...
Done (t=0.01s)
creating index...
index created!
2.0000 - loss: 0.1767 - rpn_class_loss: 0.0010 - rpn_bbox_loss: 0.0385 -
mrcnn_class_loss: 0.0035 - mrcnn_bbox_loss: 0.0315 - mrcnn_mask_loss:
0.1022loading annotations into memory...
Done (t=0.01s)
creating index...
index created!
loading annotations into memory...
Done (t=0.01s)
creating index...
index created!
2.0000 - loss: 0.1759 - rpn_class_loss: 0.0010 - rpn_bbox_loss: 0.0382 -
mrcnn_class_loss: 0.0035 - mrcnn_bbox_loss: 0.0315 - mrcnn_mask_loss:
0.1017loading annotations into memory...
Done (t=0.01s)
creating index...
index created!
loading annotations into memory...
Done (t=0.01s)
creating index...
index created!
2.0000 - loss: 0.1758 - rpn_class_loss: 0.0010 - rpn_bbox_loss: 0.0383 -
mrcnn_class_loss: 0.0035 - mrcnn_bbox_loss: 0.0317 - mrcnn_mask_loss:
0.1013loading annotations into memory...
Done (t=0.01s)
creating index...
index created!
loading annotations into memory...
Done (t=0.01s)
creating index...
index created!
```

```
2.0000 - loss: 0.1763 - rpn_class_loss: 9.9875e-04 - rpn_bbox_loss: 0.0386 -
mrcnn_class_loss: 0.0035 - mrcnn_bbox_loss: 0.0319 - mrcnn_mask_loss:
0.1012loading annotations into memory...
Done (t=0.03s)
creating index...
index created!
loading annotations into memory...
Done (t=0.01s)
creating index...
index created!
2.0000 - loss: 0.1767 - rpn_class_loss: 9.9604e-04 - rpn_bbox_loss: 0.0389 -
mrcnn_class_loss: 0.0034 - mrcnn_bbox_loss: 0.0324 - mrcnn_mask_loss:
0.1010loading annotations into memory...
Done (t=0.01s)
creating index...
index created!
loading annotations into memory...
Done (t=0.01s)
creating index...
index created!
2.0000 - loss: 0.1768 - rpn_class_loss: 9.9574e-04 - rpn_bbox_loss: 0.0391 -
mrcnn_class_loss: 0.0034 - mrcnn_bbox_loss: 0.0325 - mrcnn_mask_loss:
0.1009loading annotations into memory...
Done (t=0.01s)
creating index...
index created!
loading annotations into memory...
Done (t=0.01s)
creating index...
index created!
2.0000 - loss: 0.1765 - rpn class loss: 9.8522e-04 - rpn bbox loss: 0.0392 -
mrcnn_class_loss: 0.0034 - mrcnn_bbox_loss: 0.0322 - mrcnn_mask_loss:
0.1007loading annotations into memory...
Done (t=0.01s)
creating index...
index created!
loading annotations into memory...
Done (t=0.01s)
creating index...
index created!
2.0000 - loss: 0.1775 - rpn_class_loss: 9.9354e-04 - rpn_bbox_loss: 0.0400 -
mrcnn_class_loss: 0.0034 - mrcnn_bbox_loss: 0.0323 - mrcnn_mask_loss:
0.1008loading annotations into memory...
```

```
Done (t=0.01s)
creating index...
index created!
loading annotations into memory...
Done (t=0.01s)
creating index...
index created!
2.0000 - loss: 0.1773 - rpn_class_loss: 9.9895e-04 - rpn_bbox_loss: 0.0399 -
mrcnn_class_loss: 0.0034 - mrcnn_bbox_loss: 0.0322 - mrcnn_mask_loss:
0.1008loading annotations into memory...
Done (t=0.01s)
creating index...
index created!
loading annotations into memory...
Done (t=0.01s)
creating index...
index created!
2.0000 - loss: 0.1773 - rpn_class_loss: 9.8968e-04 - rpn_bbox_loss: 0.0397 -
mrcnn_class_loss: 0.0034 - mrcnn_bbox_loss: 0.0326 - mrcnn_mask_loss:
0.1007loading annotations into memory...
Done (t=0.01s)
creating index...
index created!
loading annotations into memory...
Done (t=0.01s)
creating index...
index created!
2.0000 - loss: 0.1773 - rpn_class_loss: 9.8010e-04 - rpn_bbox_loss: 0.0397 -
mrcnn_class_loss: 0.0033 - mrcnn_bbox_loss: 0.0326 - mrcnn_mask_loss:
0.1007loading annotations into memory...
Done (t=0.01s)
creating index...
index created!
loading annotations into memory...
Done (t=0.01s)
creating index...
index created!
2.0000 - loss: 0.1770 - rpn_class_loss: 0.0010 - rpn_bbox_loss: 0.0396 -
mrcnn_class_loss: 0.0034 - mrcnn_bbox_loss: 0.0325 - mrcnn_mask_loss: 0.1005
loading annotations into memory...
Done (t=0.01s)
creating index...
index created!
loading annotations into memory...
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Done (t=0.01s)
creating index...
index created!
2.0000 - loss: 0.1771 - rpn class loss: 0.0010 - rpn bbox loss: 0.0395 -
mrcnn_class_loss: 0.0035 - mrcnn_bbox_loss: 0.0326 - mrcnn_mask_loss:
0.1006loading annotations into memory...
Done (t=0.01s)
creating index...
index created!
loading annotations into memory...
Done (t=0.01s)
creating index...
index created!
2.0000 - loss: 0.1768 - rpn_class_loss: 0.0010 - rpn_bbox_loss: 0.0395 -
mrcnn_class_loss: 0.0034 - mrcnn_bbox_loss: 0.0323 - mrcnn_mask_loss:
0.1005loading annotations into memory...
Done (t=0.01s)
creating index...
index created!
loading annotations into memory...
Done (t=0.01s)
creating index...
index created!
2.0000 - loss: 0.1764 - rpn_class_loss: 0.0011 - rpn_bbox_loss: 0.0393 -
mrcnn_class_loss: 0.0034 - mrcnn_bbox_loss: 0.0323 - mrcnn_mask_loss:
0.1004loading annotations into memory...
Done (t=0.01s)
creating index...
index created!
loading annotations into memory...
Done (t=0.01s)
creating index...
index created!
2.0000 - loss: 0.1765 - rpn_class_loss: 0.0011 - rpn_bbox_loss: 0.0391 -
mrcnn_class_loss: 0.0034 - mrcnn_bbox_loss: 0.0322 - mrcnn_mask_loss:
0.1008loading annotations into memory...
Done (t=0.01s)
creating index...
index created!
loading annotations into memory...
Done (t=0.01s)
creating index...
index created!
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2.0000 - loss: 0.1762 - rpn_class_loss: 0.0011 - rpn_bbox_loss: 0.0391 -
mrcnn_class_loss: 0.0034 - mrcnn_bbox_loss: 0.0320 - mrcnn_mask_loss: 0.1006
loading annotations into memory...
Done (t=0.01s)
creating index...
index created!
loading annotations into memory...
Done (t=0.01s)
creating index...
index created!
2.0000 - loss: 0.1756 - rpn_class_loss: 0.0011 - rpn_bbox_loss: 0.0390 -
mrcnn_class_loss: 0.0033 - mrcnn_bbox_loss: 0.0318 - mrcnn_mask_loss:
0.1004loading annotations into memory...
Done (t=0.01s)
creating index...
index created!
loading annotations into memory...
Done (t=0.01s)
creating index...
index created!
2.0000 - loss: 0.1750 - rpn_class_loss: 0.0010 - rpn_bbox_loss: 0.0387 -
mrcnn_class_loss: 0.0033 - mrcnn_bbox_loss: 0.0316 - mrcnn_mask_loss:
0.1003loading annotations into memory...
Done (t=0.01s)
creating index...
index created!
loading annotations into memory...
Done (t=0.01s)
creating index...
index created!
2.0000 - loss: 0.1746 - rpn_class_loss: 0.0011 - rpn_bbox_loss: 0.0386 -
mrcnn class loss: 0.0033 - mrcnn bbox loss: 0.0313 - mrcnn mask loss:
0.1003loading annotations into memory...
Done (t=0.01s)
creating index...
index created!
loading annotations into memory...
Done (t=0.01s)
creating index...
index created!
2.0000 - loss: 0.1744 - rpn_class_loss: 0.0011 - rpn_bbox_loss: 0.0385 -
mrcnn_class_loss: 0.0033 - mrcnn_bbox_loss: 0.0312 - mrcnn_mask_loss:
0.1003loading annotations into memory...
Done (t=0.01s)
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creating index...
index created!
loading annotations into memory...
Done (t=0.01s)
creating index...
index created!
2.0000 - loss: 0.1740 - rpn_class_loss: 0.0010 - rpn_bbox_loss: 0.0383 -
mrcnn_class_loss: 0.0033 - mrcnn_bbox_loss: 0.0310 - mrcnn_mask_loss:
0.1005loading annotations into memory...
Done (t=0.01s)
creating index...
index created!
loading annotations into memory...
Done (t=0.01s)
creating index...
index created!
2.0000 - loss: 0.1735 - rpn_class_loss: 0.0011 - rpn_bbox_loss: 0.0381 -
mrcnn_class_loss: 0.0032 - mrcnn_bbox_loss: 0.0309 - mrcnn_mask_loss:
0.1001loading annotations into memory...
Done (t=0.01s)
creating index...
index created!
loading annotations into memory...
Done (t=0.01s)
creating index...
index created!
2.0000 - loss: 0.1729 - rpn_class_loss: 0.0011 - rpn_bbox_loss: 0.0379 -
mrcnn_class_loss: 0.0032 - mrcnn_bbox_loss: 0.0307 - mrcnn_mask_loss:
0.1001loading annotations into memory...
Done (t=0.01s)
creating index...
index created!
loading annotations into memory...
Done (t=0.01s)
creating index...
index created!
95/100 [==========>..] - ETA: 3s - batch: 47.0000 - size:
2.0000 - loss: 0.1728 - rpn_class_loss: 0.0011 - rpn_bbox_loss: 0.0378 -
mrcnn_class_loss: 0.0032 - mrcnn_bbox_loss: 0.0306 - mrcnn_mask_loss:
0.1001loading annotations into memory...
Done (t=0.01s)
creating index...
index created!
loading annotations into memory...
Done (t=0.02s)
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creating index...
index created!
96/100 [==========>:.] - ETA: 3s - batch: 47.5000 - size:
2.0000 - loss: 0.1735 - rpn_class_loss: 0.0011 - rpn_bbox_loss: 0.0382 -
mrcnn class loss: 0.0032 - mrcnn bbox loss: 0.0306 - mrcnn mask loss:
0.1004loading annotations into memory...
Done (t=0.02s)
creating index...
index created!
loading annotations into memory...
Done (t=0.01s)
creating index...
index created!
2.0000 - loss: 0.1733 - rpn_class_loss: 0.0011 - rpn_bbox_loss: 0.0380 -
mrcnn_class_loss: 0.0032 - mrcnn_bbox_loss: 0.0305 - mrcnn_mask_loss:
0.1005loading annotations into memory...
Done (t=0.01s)
creating index...
index created!
loading annotations into memory...
Done (t=0.01s)
creating index...
index created!
2.0000 - loss: 0.1731 - rpn_class_loss: 0.0011 - rpn_bbox_loss: 0.0380 -
mrcnn_class_loss: 0.0032 - mrcnn_bbox_loss: 0.0302 - mrcnn_mask_loss:
0.1006loading annotations into memory...
Done (t=0.01s)
creating index...
index created!
loading annotations into memory...
Done (t=0.01s)
creating index...
index created!
2.0000 - loss: 0.1724 - rpn class loss: 0.0011 - rpn bbox loss: 0.0377 -
mrcnn_class_loss: 0.0032 - mrcnn_bbox_loss: 0.0301 - mrcnn_mask_loss:
0.1003loading annotations into memory...
Done (t=0.01s)
creating index...
index created!
loading annotations into memory...
Done (t=0.01s)
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index created!
2.0000 - loss: 0.1723 - rpn_class_loss: 0.0011 - rpn_bbox_loss: 0.0376 -
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mrcnn_class_loss: 0.0032 - mrcnn_bbox_loss: 0.0302 - mrcnn_mask_loss:
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creating index...
index created!
2.0000 - loss: 0.1723 - rpn_class_loss: 0.0011 - rpn_bbox_loss: 0.0376 -
mrcnn_class_loss: 0.0032 - mrcnn_bbox_loss: 0.0302 - mrcnn_mask_loss: 0.1003 -
val_loss: 0.6671 - val_rpn_class_loss: 0.0134 - val_rpn_bbox_loss: 0.3548 -
val_mrcnn_class_loss: 0.0068 - val_mrcnn_bbox_loss: 0.1100 -
val_mrcnn_mask_loss: 0.1821
Epoch 8/10
loading annotations into memory...
Done (t=0.01s)
creating index...
index created!
loading annotations into memory...
Done (t=0.01s)
creating index...
index created!
  1/100 [...] - ETA: 1:10 - batch: 0.0000e+00 - size:
2.0000 - loss: 0.1433 - rpn_class_loss: 5.4153e-04 - rpn_bbox_loss: 0.0278 -
mrcnn class loss: 0.0029 - mrcnn bbox loss: 0.0197 - mrcnn mask loss:
0.0923loading annotations into memory...
Done (t=0.01s)
creating index...
index created!
loading annotations into memory...
Done (t=0.01s)
creating index...
index created!
  2/100 [...] - ETA: 1:09 - batch: 0.5000 - size:
2.0000 - loss: 0.2336 - rpn_class_loss: 5.9795e-04 - rpn_bbox_loss: 0.0412 -
mrcnn_class loss: 0.0120 - mrcnn_bbox_loss: 0.0879 - mrcnn_mask_loss: 0.0919
loading annotations into memory...
Done (t=0.01s)
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creating index...
index created!
loading annotations into memory...
Done (t=0.01s)
creating index...
index created!
  3/100 [...] - ETA: 1:08 - batch: 1.0000 - size:
2.0000 - loss: 0.2083 - rpn_class_loss: 5.6139e-04 - rpn_bbox_loss: 0.0366 -
mrcnn_class_loss: 0.0085 - mrcnn_bbox_loss: 0.0711 - mrcnn_mask_loss:
0.0915loading annotations into memory...
Done (t=0.01s)
creating index...
index created!
loading annotations into memory...
Done (t=0.01s)
creating index...
index created!
  4/100 [>...] - ETA: 1:08 - batch: 1.5000 - size:
2.0000 - loss: 0.2015 - rpn_class_loss: 6.0684e-04 - rpn_bbox_loss: 0.0382 -
mrcnn_class_loss: 0.0069 - mrcnn_bbox_loss: 0.0649 - mrcnn_mask_loss:
0.0909loading annotations into memory...
Done (t=0.01s)
creating index...
index created!
loading annotations into memory...
Done (t=0.01s)
creating index...
index created!
  5/100 [>...] - ETA: 1:07 - batch: 2.0000 - size:
2.0000 - loss: 0.1876 - rpn_class_loss: 6.4563e-04 - rpn_bbox_loss: 0.0341 -
mrcnn_class_loss: 0.0055 - mrcnn_bbox_loss: 0.0536 - mrcnn_mask_loss:
0.0938loading annotations into memory...
Done (t=0.01s)
creating index...
index created!
loading annotations into memory...
Done (t=0.01s)
creating index...
index created!
  6/100 [>...] - ETA: 1:06 - batch: 2.5000 - size:
2.0000 - loss: 0.1785 - rpn_class_loss: 6.5248e-04 - rpn_bbox_loss: 0.0328 -
mrcnn_class_loss: 0.0048 - mrcnn_bbox_loss: 0.0472 - mrcnn_mask_loss:
0.0932loading annotations into memory...
Done (t=0.01s)
creating index...
index created!
loading annotations into memory...
Done (t=0.01s)
```

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creating index...
index created!
  7/100 [=>...] - ETA: 1:05 - batch: 3.0000 - size:
2.0000 - loss: 0.1714 - rpn_class_loss: 6.4062e-04 - rpn_bbox_loss: 0.0339 -
mrcnn_class_loss: 0.0041 - mrcnn_bbox_loss: 0.0429 - mrcnn_mask_loss:
0.0898loading annotations into memory...
Done (t=0.01s)
creating index...
index created!
loading annotations into memory...
Done (t=0.01s)
creating index...
index created!
  8/100 [=>...] - ETA: 1:04 - batch: 3.5000 - size:
2.0000 - loss: 0.1649 - rpn_class_loss: 5.7984e-04 - rpn_bbox_loss: 0.0324 -
mrcnn_class_loss: 0.0037 - mrcnn_bbox_loss: 0.0393 - mrcnn_mask_loss:
0.0889loading annotations into memory...
Done (t=0.01s)
creating index...
index created!
loading annotations into memory...
Done (t=0.01s)
creating index...
index created!
  9/100 [=>...] - ETA: 1:04 - batch: 4.0000 - size:
2.0000 - loss: 0.1637 - rpn_class_loss: 5.6962e-04 - rpn_bbox_loss: 0.0321 -
mrcnn_class_loss: 0.0033 - mrcnn_bbox_loss: 0.0393 - mrcnn_mask_loss:
0.0884loading annotations into memory...
Done (t=0.01s)
creating index...
index created!
loading annotations into memory...
Done (t=0.01s)
creating index...
index created!
 10/100 [==>...] - ETA: 1:03 - batch: 4.5000 - size:
2.0000 - loss: 0.1642 - rpn_class_loss: 5.6968e-04 - rpn_bbox_loss: 0.0341 -
mrcnn_class_loss: 0.0036 - mrcnn_bbox_loss: 0.0383 - mrcnn_mask_loss:
0.0877loading annotations into memory...
Done (t=0.01s)
creating index...
index created!
loading annotations into memory...
Done (t=0.01s)
creating index...
index created!
11/100 [==>...] - ETA: 1:03 - batch: 5.0000 - size:
2.0000 - loss: 0.1628 - rpn_class_loss: 5.8054e-04 - rpn_bbox_loss: 0.0343 -
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mrcnn_class_loss: 0.0033 - mrcnn_bbox_loss: 0.0367 - mrcnn_mask_loss:
0.0880loading annotations into memory...
Done (t=0.01s)
creating index...
index created!
loading annotations into memory...
Done (t=0.01s)
creating index...
index created!
 12/100 [==>...] - ETA: 1:03 - batch: 5.5000 - size:
2.0000 - loss: 0.1584 - rpn_class_loss: 5.6234e-04 - rpn_bbox_loss: 0.0326 -
mrcnn_class_loss: 0.0030 - mrcnn_bbox_loss: 0.0341 - mrcnn_mask_loss:
0.0882loading annotations into memory...
Done (t=0.01s)
creating index...
index created!
loading annotations into memory...
Done (t=0.01s)
creating index...
index created!
13/100 [==>...] - ETA: 1:04 - batch: 6.0000 - size:
2.0000 - loss: 0.1565 - rpn_class_loss: 6.1148e-04 - rpn_bbox_loss: 0.0320 -
mrcnn_class_loss: 0.0028 - mrcnn_bbox_loss: 0.0327 - mrcnn_mask_loss:
0.0884loading annotations into memory...
Done (t=0.02s)
creating index...
index created!
loading annotations into memory...
Done (t=0.01s)
creating index...
index created!
14/100 [===>...] - ETA: 1:04 - batch: 6.5000 - size:
2.0000 - loss: 0.1549 - rpn_class_loss: 6.5115e-04 - rpn_bbox_loss: 0.0312 -
mrcnn_class_loss: 0.0026 - mrcnn_bbox_loss: 0.0314 - mrcnn_mask_loss:
0.0891loading annotations into memory...
Done (t=0.01s)
creating index...
index created!
loading annotations into memory...
Done (t=0.01s)
creating index...
index created!
15/100 [===>...] - ETA: 1:04 - batch: 7.0000 - size:
2.0000 - loss: 0.1594 - rpn_class_loss: 6.3462e-04 - rpn_bbox_loss: 0.0307 -
mrcnn_class_loss: 0.0025 - mrcnn_bbox_loss: 0.0362 - mrcnn_mask_loss:
0.0895loading annotations into memory...
Done (t=0.01s)
creating index...
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index created!
loading annotations into memory...
Done (t=0.01s)
creating index...
index created!
16/100 [===>...] - ETA: 1:03 - batch: 7.5000 - size:
2.0000 - loss: 0.1575 - rpn class loss: 6.1115e-04 - rpn bbox loss: 0.0300 -
mrcnn_class_loss: 0.0023 - mrcnn_bbox_loss: 0.0344 - mrcnn_mask_loss:
0.0901loading annotations into memory...
Done (t=0.01s)
creating index...
index created!
loading annotations into memory...
Done (t=0.01s)
creating index...
index created!
17/100 [====>...] - ETA: 1:02 - batch: 8.0000 - size:
2.0000 - loss: 0.1631 - rpn_class_loss: 5.8761e-04 - rpn_bbox_loss: 0.0300 -
mrcnn_class_loss: 0.0024 - mrcnn_bbox_loss: 0.0374 - mrcnn_mask_loss:
0.0927loading annotations into memory...
Done (t=0.01s)
creating index...
index created!
loading annotations into memory...
Done (t=0.01s)
creating index...
index created!
18/100 [====>...] - ETA: 1:01 - batch: 8.5000 - size:
2.0000 - loss: 0.1640 - rpn_class_loss: 5.9134e-04 - rpn_bbox_loss: 0.0294 -
mrcnn_class_loss: 0.0023 - mrcnn_bbox_loss: 0.0377 - mrcnn_mask_loss:
0.0940loading annotations into memory...
Done (t=0.01s)
creating index...
index created!
loading annotations into memory...
Done (t=0.01s)
creating index...
index created!
19/100 [====>...] - ETA: 1:00 - batch: 9.0000 - size:
2.0000 - loss: 0.1629 - rpn_class_loss: 5.9648e-04 - rpn_bbox_loss: 0.0289 -
mrcnn_class_loss: 0.0022 - mrcnn_bbox_loss: 0.0359 - mrcnn_mask_loss:
0.0953loading annotations into memory...
Done (t=0.01s)
creating index...
index created!
loading annotations into memory...
Done (t=0.01s)
creating index...
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index created!
 20/100 [====>...] - ETA: 59s - batch: 9.5000 - size:
2.0000 - loss: 0.1628 - rpn_class_loss: 5.9366e-04 - rpn_bbox_loss: 0.0288 -
mrcnn_class_loss: 0.0022 - mrcnn_bbox_loss: 0.0361 - mrcnn_mask_loss: 0.0950
loading annotations into memory...
Done (t=0.01s)
creating index...
index created!
loading annotations into memory...
Done (t=0.01s)
creating index...
index created!
21/100 [====>...] - ETA: 58s - batch: 10.0000 - size:
2.0000 - loss: 0.1791 - rpn_class_loss: 6.9738e-04 - rpn_bbox_loss: 0.0345 -
mrcnn_class_loss: 0.0028 - mrcnn_bbox_loss: 0.0463 - mrcnn_mask_loss:
0.0948loading annotations into memory...
Done (t=0.01s)
creating index...
index created!
loading annotations into memory...
Done (t=0.01s)
creating index...
index created!
22/100 [====>...] - ETA: 57s - batch: 10.5000 - size:
2.0000 - loss: 0.1781 - rpn_class_loss: 6.8540e-04 - rpn_bbox_loss: 0.0341 -
mrcnn_class_loss: 0.0027 - mrcnn_bbox_loss: 0.0458 - mrcnn_mask_loss:
0.0948loading annotations into memory...
Done (t=0.01s)
creating index...
index created!
loading annotations into memory...
Done (t=0.01s)
creating index...
index created!
23/100 [====>...] - ETA: 57s - batch: 11.0000 - size:
2.0000 - loss: 0.1754 - rpn_class_loss: 6.6599e-04 - rpn_bbox_loss: 0.0332 -
mrcnn_class_loss: 0.0026 - mrcnn_bbox_loss: 0.0443 - mrcnn_mask_loss:
0.0946loading annotations into memory...
Done (t=0.01s)
creating index...
index created!
loading annotations into memory...
Done (t=0.01s)
creating index...
index created!
24/100 [=====>...] - ETA: 56s - batch: 11.5000 - size:
2.0000 - loss: 0.1754 - rpn_class_loss: 6.4796e-04 - rpn_bbox_loss: 0.0334 -
mrcnn_class_loss: 0.0026 - mrcnn_bbox_loss: 0.0441 - mrcnn_mask_loss:
```

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0.0946loading annotations into memory...
Done (t=0.01s)
creating index...
index created!
loading annotations into memory...
Done (t=0.01s)
creating index...
index created!
25/100 [=====>...] - ETA: 55s - batch: 12.0000 - size:
2.0000 - loss: 0.1732 - rpn_class_loss: 6.3327e-04 - rpn_bbox_loss: 0.0327 -
mrcnn_class loss: 0.0025 - mrcnn_bbox_loss: 0.0429 - mrcnn_mask loss:
0.0944loading annotations into memory...
Done (t=0.01s)
creating index...
index created!
loading annotations into memory...
Done (t=0.01s)
creating index...
index created!
26/100 [=====>...] - ETA: 54s - batch: 12.5000 - size:
2.0000 - loss: 0.1742 - rpn_class_loss: 6.2556e-04 - rpn_bbox_loss: 0.0322 -
mrcnn_class_loss: 0.0027 - mrcnn_bbox_loss: 0.0441 - mrcnn_mask_loss:
0.0946loading annotations into memory...
Done (t=0.01s)
creating index...
index created!
loading annotations into memory...
Done (t=0.01s)
creating index...
index created!
27/100 [======>...] - ETA: 53s - batch: 13.0000 - size:
2.0000 - loss: 0.1762 - rpn_class_loss: 6.1157e-04 - rpn_bbox_loss: 0.0319 -
mrcnn_class_loss: 0.0028 - mrcnn_bbox_loss: 0.0457 - mrcnn_mask_loss:
0.0951loading annotations into memory...
Done (t=0.01s)
creating index...
index created!
loading annotations into memory...
Done (t=0.01s)
creating index...
index created!
28/100 [======>...] - ETA: 52s - batch: 13.5000 - size:
2.0000 - loss: 0.1776 - rpn_class_loss: 5.9554e-04 - rpn_bbox_loss: 0.0322 -
mrcnn_class_loss: 0.0027 - mrcnn_bbox_loss: 0.0451 - mrcnn_mask_loss:
0.0970loading annotations into memory...
Done (t=0.01s)
creating index...
index created!
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loading annotations into memory...
Done (t=0.02s)
creating index...
index created!
29/100 [======>...] - ETA: 52s - batch: 14.0000 - size:
2.0000 - loss: 0.1768 - rpn_class_loss: 6.0289e-04 - rpn_bbox_loss: 0.0319 -
mrcnn class loss: 0.0027 - mrcnn bbox loss: 0.0446 - mrcnn mask loss:
0.0970loading annotations into memory...
Done (t=0.02s)
creating index...
index created!
loading annotations into memory...
Done (t=0.01s)
creating index...
index created!
30/100 [======>...] - ETA: 51s - batch: 14.5000 - size:
2.0000 - loss: 0.1753 - rpn_class_loss: 6.0027e-04 - rpn_bbox_loss: 0.0316 -
mrcnn_class_loss: 0.0027 - mrcnn_bbox_loss: 0.0440 - mrcnn_mask_loss:
0.0965loading annotations into memory...
Done (t=0.01s)
creating index...
index created!
loading annotations into memory...
Done (t=0.01s)
creating index...
index created!
31/100 [======>...] - ETA: 51s - batch: 15.0000 - size:
2.0000 - loss: 0.1751 - rpn_class_loss: 5.8376e-04 - rpn_bbox_loss: 0.0316 -
mrcnn_class_loss: 0.0029 - mrcnn_bbox_loss: 0.0441 - mrcnn_mask_loss:
0.0959loading annotations into memory...
Done (t=0.02s)
creating index...
index created!
loading annotations into memory...
Done (t=0.01s)
creating index...
index created!
32/100 [======>...] - ETA: 50s - batch: 15.5000 - size:
2.0000 - loss: 0.1743 - rpn_class_loss: 6.0079e-04 - rpn_bbox_loss: 0.0315 -
mrcnn_class_loss: 0.0028 - mrcnn_bbox_loss: 0.0434 - mrcnn_mask_loss:
0.0959loading annotations into memory...
Done (t=0.01s)
creating index...
index created!
loading annotations into memory...
Done (t=0.01s)
creating index...
index created!
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33/100 [=======>...] - ETA: 50s - batch: 16.0000 - size:
2.0000 - loss: 0.1741 - rpn_class_loss: 5.9810e-04 - rpn_bbox_loss: 0.0312 -
mrcnn_class_loss: 0.0029 - mrcnn_bbox_loss: 0.0430 - mrcnn_mask_loss:
0.0964loading annotations into memory...
Done (t=0.01s)
creating index...
index created!
loading annotations into memory...
Done (t=0.01s)
creating index...
index created!
34/100 [=======>...] - ETA: 49s - batch: 16.5000 - size:
2.0000 - loss: 0.1735 - rpn_class_loss: 5.9145e-04 - rpn_bbox_loss: 0.0310 -
mrcnn_class_loss: 0.0032 - mrcnn_bbox_loss: 0.0422 - mrcnn_mask_loss:
0.0965loading annotations into memory...
Done (t=0.01s)
creating index...
index created!
loading annotations into memory...
Done (t=0.01s)
creating index...
index created!
35/100 [=======>...] - ETA: 48s - batch: 17.0000 - size:
2.0000 - loss: 0.1722 - rpn_class_loss: 6.1126e-04 - rpn_bbox_loss: 0.0306 -
mrcnn_class_loss: 0.0031 - mrcnn_bbox_loss: 0.0418 - mrcnn_mask_loss:
0.0961loading annotations into memory...
Done (t=0.01s)
creating index...
index created!
loading annotations into memory...
Done (t=0.01s)
creating index...
index created!
36/100 [======>...] - ETA: 48s - batch: 17.5000 - size:
2.0000 - loss: 0.1718 - rpn class loss: 6.1341e-04 - rpn bbox loss: 0.0304 -
mrcnn_class_loss: 0.0030 - mrcnn_bbox_loss: 0.0411 - mrcnn_mask_loss:
0.0966loading annotations into memory...
Done (t=0.01s)
creating index...
index created!
loading annotations into memory...
Done (t=0.01s)
creating index...
index created!
37/100 [=======>...] - ETA: 47s - batch: 18.0000 - size:
2.0000 - loss: 0.1719 - rpn_class_loss: 6.0624e-04 - rpn_bbox_loss: 0.0304 -
mrcnn_class_loss: 0.0030 - mrcnn_bbox_loss: 0.0411 - mrcnn_mask_loss:
0.0969loading annotations into memory...
```

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Done (t=0.01s)
creating index...
index created!
loading annotations into memory...
Done (t=0.01s)
creating index...
index created!
38/100 [=======>...] - ETA: 46s - batch: 18.5000 - size:
2.0000 - loss: 0.1723 - rpn_class_loss: 6.1832e-04 - rpn_bbox_loss: 0.0303 -
mrcnn_class_loss: 0.0029 - mrcnn_bbox_loss: 0.0406 - mrcnn_mask_loss:
0.0978loading annotations into memory...
Done (t=0.01s)
creating index...
index created!
loading annotations into memory...
Done (t=0.01s)
creating index...
index created!
39/100 [=======>...] - ETA: 45s - batch: 19.0000 - size:
2.0000 - loss: 0.1712 - rpn_class_loss: 6.2234e-04 - rpn_bbox_loss: 0.0300 -
mrcnn_class_loss: 0.0028 - mrcnn_bbox_loss: 0.0403 - mrcnn_mask_loss:
0.0975loading annotations into memory...
Done (t=0.01s)
creating index...
index created!
loading annotations into memory...
Done (t=0.01s)
creating index...
index created!
40/100 [========>...] - ETA: 44s - batch: 19.5000 - size:
2.0000 - loss: 0.1692 - rpn_class_loss: 6.2283e-04 - rpn_bbox_loss: 0.0296 -
mrcnn_class_loss: 0.0027 - mrcnn_bbox_loss: 0.0396 - mrcnn_mask_loss:
0.0967loading annotations into memory...
Done (t=0.01s)
creating index...
index created!
loading annotations into memory...
Done (t=0.01s)
creating index...
index created!
41/100 [========>...] - ETA: 44s - batch: 20.0000 - size:
2.0000 - loss: 0.1690 - rpn_class_loss: 6.2300e-04 - rpn_bbox_loss: 0.0297 -
mrcnn_class_loss: 0.0027 - mrcnn_bbox_loss: 0.0390 - mrcnn_mask_loss:
0.0970loading annotations into memory...
Done (t=0.01s)
creating index...
index created!
loading annotations into memory...
```

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Done (t=0.01s)
creating index...
index created!
42/100 [========>...] - ETA: 43s - batch: 20.5000 - size:
2.0000 - loss: 0.1695 - rpn_class_loss: 6.1652e-04 - rpn_bbox_loss: 0.0300 -
mrcnn_class_loss: 0.0027 - mrcnn_bbox_loss: 0.0391 - mrcnn_mask_loss:
0.0970loading annotations into memory...
Done (t=0.01s)
creating index...
index created!
loading annotations into memory...
Done (t=0.01s)
creating index...
index created!
43/100 [========>...] - ETA: 42s - batch: 21.0000 - size:
2.0000 - loss: 0.1693 - rpn_class_loss: 7.2502e-04 - rpn_bbox_loss: 0.0300 -
mrcnn_class_loss: 0.0027 - mrcnn_bbox_loss: 0.0393 - mrcnn_mask_loss:
0.0966loading annotations into memory...
Done (t=0.01s)
creating index...
index created!
loading annotations into memory...
Done (t=0.01s)
creating index...
index created!
2.0000 - loss: 0.1684 - rpn_class_loss: 7.2276e-04 - rpn_bbox_loss: 0.0297 -
mrcnn_class_loss: 0.0027 - mrcnn_bbox_loss: 0.0391 - mrcnn_mask loss:
0.0962loading annotations into memory...
Done (t=0.01s)
creating index...
index created!
loading annotations into memory...
Done (t=0.01s)
creating index...
index created!
2.0000 - loss: 0.1687 - rpn_class_loss: 7.2302e-04 - rpn_bbox_loss: 0.0298 -
mrcnn_class_loss: 0.0027 - mrcnn_bbox_loss: 0.0393 - mrcnn_mask_loss:
0.0962loading annotations into memory...
Done (t=0.01s)
creating index...
index created!
loading annotations into memory...
Done (t=0.01s)
creating index...
index created!
46/100 [=========>...] - ETA: 40s - batch: 22.5000 - size:
```

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2.0000 - loss: 0.1684 - rpn_class_loss: 7.2579e-04 - rpn_bbox_loss: 0.0297 -
mrcnn_class_loss: 0.0028 - mrcnn_bbox_loss: 0.0389 - mrcnn_mask_loss:
0.0962loading annotations into memory...
Done (t=0.01s)
creating index...
index created!
loading annotations into memory...
Done (t=0.01s)
creating index...
index created!
2.0000 - loss: 0.1674 - rpn_class_loss: 7.3108e-04 - rpn_bbox_loss: 0.0296 -
mrcnn_class_loss: 0.0028 - mrcnn_bbox_loss: 0.0385 - mrcnn_mask_loss:
0.0958loading annotations into memory...
Done (t=0.01s)
creating index...
index created!
loading annotations into memory...
Done (t=0.01s)
creating index...
index created!
48/100 [=========>...] - ETA: 38s - batch: 23.5000 - size:
2.0000 - loss: 0.1680 - rpn_class_loss: 7.3081e-04 - rpn_bbox_loss: 0.0296 -
mrcnn_class_loss: 0.0030 - mrcnn_bbox_loss: 0.0383 - mrcnn_mask_loss:
0.0963loading annotations into memory...
Done (t=0.01s)
creating index...
index created!
loading annotations into memory...
Done (t=0.01s)
creating index...
index created!
2.0000 - loss: 0.1665 - rpn_class_loss: 7.4000e-04 - rpn_bbox_loss: 0.0293 -
mrcnn class loss: 0.0030 - mrcnn bbox loss: 0.0378 - mrcnn mask loss:
0.0957loading annotations into memory...
Done (t=0.01s)
creating index...
index created!
loading annotations into memory...
Done (t=0.02s)
creating index...
index created!
2.0000 - loss: 0.1667 - rpn_class_loss: 7.4440e-04 - rpn_bbox_loss: 0.0292 -
mrcnn_class_loss: 0.0031 - mrcnn_bbox_loss: 0.0375 - mrcnn_mask_loss:
0.0962loading annotations into memory...
Done (t=0.01s)
```

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creating index...
index created!
loading annotations into memory...
Done (t=0.01s)
creating index...
index created!
2.0000 - loss: 0.1674 - rpn_class_loss: 7.4194e-04 - rpn_bbox_loss: 0.0297 -
mrcnn_class_loss: 0.0031 - mrcnn_bbox_loss: 0.0377 - mrcnn_mask_loss:
0.0962loading annotations into memory...
Done (t=0.01s)
creating index...
index created!
loading annotations into memory...
Done (t=0.01s)
creating index...
index created!
52/100 [========>...] - ETA: 36s - batch: 25.5000 - size:
2.0000 - loss: 0.1682 - rpn_class_loss: 7.3805e-04 - rpn_bbox_loss: 0.0299 -
mrcnn_class_loss: 0.0033 - mrcnn_bbox_loss: 0.0379 - mrcnn_mask_loss:
0.0964loading annotations into memory...
Done (t=0.01s)
creating index...
index created!
loading annotations into memory...
Done (t=0.01s)
creating index...
index created!
2.0000 - loss: 0.1706 - rpn_class_loss: 7.3321e-04 - rpn_bbox_loss: 0.0305 -
mrcnn_class_loss: 0.0034 - mrcnn_bbox_loss: 0.0393 - mrcnn_mask_loss:
0.0967loading annotations into memory...
Done (t=0.01s)
creating index...
index created!
loading annotations into memory...
Done (t=0.01s)
creating index...
index created!
2.0000 - loss: 0.1695 - rpn_class_loss: 7.2966e-04 - rpn_bbox_loss: 0.0302 -
mrcnn_class_loss: 0.0035 - mrcnn_bbox_loss: 0.0388 - mrcnn_mask_loss:
0.0963loading annotations into memory...
Done (t=0.01s)
creating index...
index created!
loading annotations into memory...
Done (t=0.01s)
```

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creating index...
index created!
2.0000 - loss: 0.1714 - rpn_class_loss: 7.2028e-04 - rpn_bbox_loss: 0.0313 -
mrcnn_class_loss: 0.0036 - mrcnn_bbox_loss: 0.0396 - mrcnn_mask_loss:
0.0961loading annotations into memory...
Done (t=0.01s)
creating index...
index created!
loading annotations into memory...
Done (t=0.01s)
creating index...
index created!
2.0000 - loss: 0.1708 - rpn_class_loss: 7.2475e-04 - rpn_bbox_loss: 0.0312 -
mrcnn_class_loss: 0.0036 - mrcnn_bbox_loss: 0.0396 - mrcnn_mask_loss:
0.0958loading annotations into memory...
Done (t=0.01s)
creating index...
index created!
loading annotations into memory...
Done (t=0.01s)
creating index...
index created!
57/100 [========>...] - ETA: 32s - batch: 28.0000 - size:
2.0000 - loss: 0.1706 - rpn_class_loss: 7.4097e-04 - rpn_bbox_loss: 0.0310 -
mrcnn_class_loss: 0.0036 - mrcnn_bbox_loss: 0.0394 - mrcnn_mask_loss:
0.0958loading annotations into memory...
Done (t=0.01s)
creating index...
index created!
loading annotations into memory...
Done (t=0.01s)
creating index...
index created!
2.0000 - loss: 0.1715 - rpn class loss: 7.5391e-04 - rpn bbox loss: 0.0309 -
mrcnn_class_loss: 0.0036 - mrcnn_bbox_loss: 0.0396 - mrcnn_mask_loss:
0.0965loading annotations into memory...
Done (t=0.01s)
creating index...
index created!
loading annotations into memory...
Done (t=0.01s)
creating index...
index created!
59/100 [===========>...] - ETA: 30s - batch: 29.0000 - size:
2.0000 - loss: 0.1716 - rpn_class_loss: 7.5295e-04 - rpn_bbox_loss: 0.0313 -
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mrcnn_class_loss: 0.0037 - mrcnn_bbox_loss: 0.0395 - mrcnn_mask_loss:
0.0964loading annotations into memory...
Done (t=0.01s)
creating index...
index created!
loading annotations into memory...
Done (t=0.01s)
creating index...
index created!
2.0000 - loss: 0.1722 - rpn_class_loss: 7.4380e-04 - rpn_bbox_loss: 0.0312 -
mrcnn_class_loss: 0.0037 - mrcnn_bbox_loss: 0.0394 - mrcnn_mask_loss:
0.0972loading annotations into memory...
Done (t=0.01s)
creating index...
index created!
loading annotations into memory...
Done (t=0.01s)
creating index...
index created!
2.0000 - loss: 0.1720 - rpn_class_loss: 7.4330e-04 - rpn_bbox_loss: 0.0314 -
mrcnn_class_loss: 0.0037 - mrcnn_bbox_loss: 0.0391 - mrcnn_mask_loss:
0.0971loading annotations into memory...
Done (t=0.01s)
creating index...
index created!
loading annotations into memory...
Done (t=0.01s)
creating index...
index created!
2.0000 - loss: 0.1720 - rpn_class_loss: 7.3164e-04 - rpn_bbox_loss: 0.0314 -
mrcnn_class_loss: 0.0036 - mrcnn_bbox_loss: 0.0392 - mrcnn_mask_loss:
0.0970loading annotations into memory...
Done (t=0.01s)
creating index...
index created!
loading annotations into memory...
Done (t=0.01s)
creating index...
index created!
2.0000 - loss: 0.1715 - rpn_class_loss: 7.2553e-04 - rpn_bbox_loss: 0.0314 -
mrcnn_class_loss: 0.0036 - mrcnn_bbox_loss: 0.0388 - mrcnn_mask_loss:
0.0969loading annotations into memory...
Done (t=0.01s)
creating index...
```

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index created!
loading annotations into memory...
Done (t=0.01s)
creating index...
index created!
2.0000 - loss: 0.1717 - rpn_class_loss: 7.2570e-04 - rpn_bbox_loss: 0.0313 -
mrcnn_class_loss: 0.0037 - mrcnn_bbox_loss: 0.0388 - mrcnn_mask_loss:
0.0971loading annotations into memory...
Done (t=0.01s)
creating index...
index created!
loading annotations into memory...
Done (t=0.01s)
creating index...
index created!
2.0000 - loss: 0.1720 - rpn_class_loss: 7.1688e-04 - rpn_bbox_loss: 0.0317 -
mrcnn_class_loss: 0.0037 - mrcnn_bbox_loss: 0.0387 - mrcnn_mask_loss:
0.0972loading annotations into memory...
Done (t=0.01s)
creating index...
index created!
loading annotations into memory...
Done (t=0.01s)
creating index...
index created!
2.0000 - loss: 0.1718 - rpn_class_loss: 7.1078e-04 - rpn_bbox_loss: 0.0314 -
mrcnn_class_loss: 0.0039 - mrcnn_bbox_loss: 0.0385 - mrcnn_mask_loss:
0.0973loading annotations into memory...
Done (t=0.02s)
creating index...
index created!
loading annotations into memory...
Done (t=0.01s)
creating index...
index created!
2.0000 - loss: 0.1717 - rpn_class_loss: 7.0534e-04 - rpn_bbox_loss: 0.0314 -
mrcnn_class_loss: 0.0039 - mrcnn_bbox_loss: 0.0383 - mrcnn_mask_loss:
0.0974loading annotations into memory...
Done (t=0.01s)
creating index...
index created!
loading annotations into memory...
Done (t=0.01s)
creating index...
```

```
index created!
2.0000 - loss: 0.1712 - rpn_class_loss: 7.0134e-04 - rpn_bbox_loss: 0.0313 -
mrcnn_class_loss: 0.0039 - mrcnn_bbox_loss: 0.0381 - mrcnn_mask_loss:
0.0972loading annotations into memory...
Done (t=0.01s)
creating index...
index created!
loading annotations into memory...
Done (t=0.01s)
creating index...
index created!
2.0000 - loss: 0.1707 - rpn_class_loss: 7.0252e-04 - rpn_bbox_loss: 0.0311 -
mrcnn_class_loss: 0.0039 - mrcnn_bbox_loss: 0.0379 - mrcnn_mask_loss:
0.0970loading annotations into memory...
Done (t=0.03s)
creating index...
index created!
loading annotations into memory...
Done (t=0.01s)
creating index...
index created!
2.0000 - loss: 0.1705 - rpn_class_loss: 7.0838e-04 - rpn_bbox_loss: 0.0310 -
mrcnn_class_loss: 0.0039 - mrcnn_bbox_loss: 0.0379 - mrcnn_mask_loss:
0.0970loading annotations into memory...
Done (t=0.01s)
creating index...
index created!
loading annotations into memory...
Done (t=0.01s)
creating index...
index created!
2.0000 - loss: 0.1718 - rpn_class_loss: 7.2003e-04 - rpn_bbox_loss: 0.0323 -
mrcnn_class_loss: 0.0040 - mrcnn_bbox_loss: 0.0379 - mrcnn_mask_loss:
0.0968loading annotations into memory...
Done (t=0.01s)
creating index...
index created!
loading annotations into memory...
Done (t=0.01s)
creating index...
index created!
2.0000 - loss: 0.1728 - rpn_class_loss: 7.2269e-04 - rpn_bbox_loss: 0.0335 -
mrcnn_class_loss: 0.0040 - mrcnn_bbox_loss: 0.0376 - mrcnn_mask_loss:
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0.0969loading annotations into memory...
Done (t=0.01s)
creating index...
index created!
loading annotations into memory...
Done (t=0.01s)
creating index...
index created!
2.0000 - loss: 0.1720 - rpn_class_loss: 7.2027e-04 - rpn_bbox_loss: 0.0333 -
mrcnn_class loss: 0.0040 - mrcnn_bbox_loss: 0.0373 - mrcnn_mask loss:
0.0967loading annotations into memory...
Done (t=0.01s)
creating index...
index created!
loading annotations into memory...
Done (t=0.01s)
creating index...
index created!
2.0000 - loss: 0.1720 - rpn_class_loss: 7.1332e-04 - rpn_bbox_loss: 0.0333 -
mrcnn class loss: 0.0040 - mrcnn bbox loss: 0.0374 - mrcnn mask loss:
0.0967loading annotations into memory...
Done (t=0.01s)
creating index...
index created!
loading annotations into memory...
Done (t=0.01s)
creating index...
index created!
2.0000 - loss: 0.1714 - rpn_class_loss: 7.1092e-04 - rpn_bbox_loss: 0.0331 -
mrcnn_class_loss: 0.0040 - mrcnn_bbox_loss: 0.0370 - mrcnn_mask_loss:
0.0966loading annotations into memory...
Done (t=0.01s)
creating index...
index created!
loading annotations into memory...
Done (t=0.01s)
creating index...
index created!
2.0000 - loss: 0.1715 - rpn_class_loss: 7.0999e-04 - rpn_bbox_loss: 0.0332 -
mrcnn_class_loss: 0.0040 - mrcnn_bbox_loss: 0.0369 - mrcnn_mask_loss:
0.0967loading annotations into memory...
Done (t=0.01s)
creating index...
index created!
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loading annotations into memory...
Done (t=0.01s)
creating index...
index created!
2.0000 - loss: 0.1712 - rpn_class_loss: 7.9095e-04 - rpn_bbox_loss: 0.0331 -
mrcnn class loss: 0.0040 - mrcnn bbox loss: 0.0366 - mrcnn mask loss:
0.0967loading annotations into memory...
Done (t=0.01s)
creating index...
index created!
loading annotations into memory...
Done (t=0.01s)
creating index...
index created!
2.0000 - loss: 0.1706 - rpn_class_loss: 7.8331e-04 - rpn_bbox_loss: 0.0330 -
mrcnn_class_loss: 0.0040 - mrcnn_bbox_loss: 0.0362 - mrcnn_mask_loss:
0.0966loading annotations into memory...
Done (t=0.01s)
creating index...
index created!
loading annotations into memory...
Done (t=0.01s)
creating index...
index created!
2.0000 - loss: 0.1704 - rpn_class_loss: 7.7532e-04 - rpn_bbox_loss: 0.0330 -
mrcnn_class_loss: 0.0040 - mrcnn_bbox_loss: 0.0360 - mrcnn_mask_loss:
0.0967loading annotations into memory...
Done (t=0.01s)
creating index...
index created!
loading annotations into memory...
Done (t=0.01s)
creating index...
index created!
2.0000 - loss: 0.1699 - rpn_class_loss: 7.6715e-04 - rpn_bbox_loss: 0.0329 -
mrcnn_class_loss: 0.0040 - mrcnn_bbox_loss: 0.0358 - mrcnn_mask_loss:
0.0965loading annotations into memory...
Done (t=0.01s)
creating index...
index created!
loading annotations into memory...
Done (t=0.01s)
creating index...
index created!
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2.0000 - loss: 0.1699 - rpn_class_loss: 7.6293e-04 - rpn_bbox_loss: 0.0327 -
mrcnn_class_loss: 0.0040 - mrcnn_bbox_loss: 0.0356 - mrcnn_mask_loss:
0.0969loading annotations into memory...
Done (t=0.01s)
creating index...
index created!
loading annotations into memory...
Done (t=0.01s)
creating index...
index created!
2.0000 - loss: 0.1713 - rpn_class_loss: 7.5502e-04 - rpn_bbox_loss: 0.0331 -
mrcnn_class_loss: 0.0040 - mrcnn_bbox_loss: 0.0366 - mrcnn_mask_loss:
0.0969loading annotations into memory...
Done (t=0.01s)
creating index...
index created!
loading annotations into memory...
Done (t=0.01s)
creating index...
index created!
2.0000 - loss: 0.1716 - rpn_class_loss: 7.4827e-04 - rpn_bbox_loss: 0.0331 -
mrcnn_class_loss: 0.0040 - mrcnn_bbox_loss: 0.0363 - mrcnn_mask_loss:
0.0975loading annotations into memory...
Done (t=0.01s)
creating index...
index created!
loading annotations into memory...
Done (t=0.01s)
creating index...
index created!
2.0000 - loss: 0.1722 - rpn class loss: 7.5306e-04 - rpn bbox loss: 0.0333 -
mrcnn_class_loss: 0.0040 - mrcnn_bbox_loss: 0.0363 - mrcnn_mask_loss:
0.0978loading annotations into memory...
Done (t=0.01s)
creating index...
index created!
loading annotations into memory...
Done (t=0.01s)
creating index...
index created!
2.0000 - loss: 0.1719 - rpn_class_loss: 7.4598e-04 - rpn_bbox_loss: 0.0332 -
mrcnn_class_loss: 0.0040 - mrcnn_bbox_loss: 0.0361 - mrcnn_mask_loss:
0.0979loading annotations into memory...
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Done (t=0.02s)
creating index...
index created!
loading annotations into memory...
Done (t=0.01s)
creating index...
index created!
2.0000 - loss: 0.1720 - rpn_class_loss: 7.3840e-04 - rpn_bbox_loss: 0.0331 -
mrcnn_class_loss: 0.0041 - mrcnn_bbox_loss: 0.0364 - mrcnn_mask_loss:
0.0977loading annotations into memory...
Done (t=0.01s)
creating index...
index created!
loading annotations into memory...
Done (t=0.01s)
creating index...
index created!
2.0000 - loss: 0.1720 - rpn_class_loss: 7.3364e-04 - rpn_bbox_loss: 0.0331 -
mrcnn_class_loss: 0.0041 - mrcnn_bbox_loss: 0.0361 - mrcnn_mask_loss: 0.0980
loading annotations into memory...
Done (t=0.01s)
creating index...
index created!
loading annotations into memory...
Done (t=0.01s)
creating index...
index created!
2.0000 - loss: 0.1720 - rpn_class_loss: 7.3523e-04 - rpn_bbox_loss: 0.0332 -
mrcnn_class_loss: 0.0042 - mrcnn_bbox_loss: 0.0360 - mrcnn_mask_loss:
0.0978loading annotations into memory...
Done (t=0.02s)
creating index...
index created!
loading annotations into memory...
Done (t=0.01s)
creating index...
index created!
2.0000 - loss: 0.1712 - rpn_class_loss: 7.5899e-04 - rpn_bbox_loss: 0.0330 -
mrcnn_class_loss: 0.0042 - mrcnn_bbox_loss: 0.0356 - mrcnn_mask_loss:
0.0976loading annotations into memory...
Done (t=0.02s)
creating index...
index created!
loading annotations into memory...
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Done (t=0.01s)
creating index...
index created!
2.0000 - loss: 0.1714 - rpn class loss: 7.5570e-04 - rpn bbox loss: 0.0330 -
mrcnn_class_loss: 0.0042 - mrcnn_bbox_loss: 0.0356 - mrcnn_mask_loss:
0.0978loading annotations into memory...
Done (t=0.01s)
creating index...
index created!
loading annotations into memory...
Done (t=0.01s)
creating index...
index created!
2.0000 - loss: 0.1710 - rpn_class_loss: 7.5077e-04 - rpn_bbox_loss: 0.0329 -
mrcnn_class_loss: 0.0042 - mrcnn_bbox_loss: 0.0354 - mrcnn_mask_loss:
0.0977loading annotations into memory...
Done (t=0.01s)
creating index...
index created!
loading annotations into memory...
Done (t=0.01s)
creating index...
index created!
2.0000 - loss: 0.1706 - rpn_class_loss: 7.4339e-04 - rpn_bbox_loss: 0.0330 -
mrcnn_class_loss: 0.0042 - mrcnn_bbox_loss: 0.0352 - mrcnn_mask_loss:
0.0975loading annotations into memory...
Done (t=0.01s)
creating index...
index created!
loading annotations into memory...
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creating index...
index created!
2.0000 - loss: 0.1704 - rpn_class_loss: 7.3803e-04 - rpn_bbox_loss: 0.0329 -
mrcnn_class_loss: 0.0042 - mrcnn_bbox_loss: 0.0352 - mrcnn_mask_loss:
0.0974loading annotations into memory...
Done (t=0.01s)
creating index...
index created!
loading annotations into memory...
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creating index...
index created!
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2.0000 - loss: 0.1701 - rpn_class_loss: 7.7195e-04 - rpn_bbox_loss: 0.0327 -
mrcnn_class_loss: 0.0042 - mrcnn_bbox_loss: 0.0350 - mrcnn_mask_loss:
0.0974loading annotations into memory...
Done (t=0.01s)
creating index...
index created!
loading annotations into memory...
Done (t=0.01s)
creating index...
index created!
2.0000 - loss: 0.1697 - rpn_class_loss: 7.6649e-04 - rpn_bbox_loss: 0.0326 -
mrcnn_class_loss: 0.0042 - mrcnn_bbox_loss: 0.0348 - mrcnn_mask_loss:
0.0973loading annotations into memory...
Done (t=0.02s)
creating index...
index created!
loading annotations into memory...
Done (t=0.01s)
creating index...
index created!
2.0000 - loss: 0.1694 - rpn_class_loss: 7.7202e-04 - rpn_bbox_loss: 0.0325 -
mrcnn_class_loss: 0.0043 - mrcnn_bbox_loss: 0.0347 - mrcnn_mask_loss:
0.0971loading annotations into memory...
Done (t=0.01s)
creating index...
index created!
loading annotations into memory...
Done (t=0.01s)
creating index...
index created!
2.0000 - loss: 0.1693 - rpn_class_loss: 7.6971e-04 - rpn_bbox_loss: 0.0325 -
mrcnn class loss: 0.0044 - mrcnn bbox loss: 0.0345 - mrcnn mask loss:
0.0972loading annotations into memory...
Done (t=0.01s)
creating index...
index created!
loading annotations into memory...
Done (t=0.01s)
creating index...
index created!
2.0000 - loss: 0.1697 - rpn_class_loss: 7.6234e-04 - rpn_bbox_loss: 0.0327 -
mrcnn_class_loss: 0.0044 - mrcnn_bbox_loss: 0.0348 - mrcnn_mask_loss:
0.0970loading annotations into memory...
Done (t=0.01s)
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creating index...
index created!
loading annotations into memory...
Done (t=0.01s)
creating index...
index created!
2.0000 - loss: 0.1692 - rpn_class_loss: 7.7840e-04 - rpn_bbox_loss: 0.0327 -
mrcnn_class_loss: 0.0044 - mrcnn_bbox_loss: 0.0345 - mrcnn_mask_loss:
0.0968loading annotations into memory...
Done (t=0.01s)
creating index...
index created!
loading annotations into memory...
Done (t=0.01s)
creating index...
index created!
100/100 [============== ] - ETA: Os - batch: 49.5000 - size:
2.0000 - loss: 0.1688 - rpn_class_loss: 7.7641e-04 - rpn_bbox_loss: 0.0326 -
mrcnn_class_loss: 0.0044 - mrcnn_bbox_loss: 0.0344 - mrcnn_mask_loss:
0.0967loading annotations into memory...
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index created!
2.0000 - loss: 0.1688 - rpn_class_loss: 7.7641e-04 - rpn_bbox_loss: 0.0326 -
mrcnn_class_loss: 0.0044 - mrcnn_bbox_loss: 0.0344 - mrcnn_mask_loss: 0.0967 -
val_loss: 0.6668 - val_rpn_class_loss: 0.0123 - val_rpn_bbox_loss: 0.3419 -
val_mrcnn_class_loss: 0.0067 - val_mrcnn_bbox_loss: 0.1005 -
val_mrcnn_mask_loss: 0.2055
Epoch 9/10
loading annotations into memory...
Done (t=0.01s)
creating index...
index created!
loading annotations into memory...
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Done (t=0.01s)
creating index...
index created!
  1/100 [...] - ETA: 1:09 - batch: 0.0000e+00 - size:
2.0000 - loss: 0.1426 - rpn_class_loss: 7.7012e-05 - rpn_bbox_loss: 0.0270 -
mrcnn_class_loss: 0.0017 - mrcnn_bbox_loss: 0.0345 - mrcnn_mask_loss:
0.0793loading annotations into memory...
Done (t=0.01s)
creating index...
index created!
loading annotations into memory...
Done (t=0.01s)
creating index...
index created!
  2/100 [...] - ETA: 1:10 - batch: 0.5000 - size:
2.0000 - loss: 0.2047 - rpn_class_loss: 3.1056e-04 - rpn_bbox_loss: 0.0429 -
mrcnn_class_loss: 0.0025 - mrcnn_bbox_loss: 0.0601 - mrcnn_mask_loss: 0.0989
loading annotations into memory...
Done (t=0.01s)
creating index...
index created!
loading annotations into memory...
Done (t=0.01s)
creating index...
index created!
  3/100 [...] - ETA: 1:09 - batch: 1.0000 - size:
2.0000 - loss: 0.1931 - rpn_class_loss: 3.1314e-04 - rpn_bbox_loss: 0.0395 -
mrcnn_class_loss: 0.0022 - mrcnn_bbox_loss: 0.0560 - mrcnn_mask_loss:
0.0951loading annotations into memory...
Done (t=0.01s)
creating index...
index created!
loading annotations into memory...
Done (t=0.01s)
creating index...
index created!
  4/100 [>...] - ETA: 1:13 - batch: 1.5000 - size:
2.0000 - loss: 0.1989 - rpn_class_loss: 5.7452e-04 - rpn_bbox_loss: 0.0397 -
mrcnn_class_loss: 0.0024 - mrcnn_bbox_loss: 0.0534 - mrcnn_mask_loss:
0.1028loading annotations into memory...
Done (t=0.01s)
creating index...
index created!
loading annotations into memory...
Done (t=0.01s)
creating index...
index created!
  5/100 [>...] - ETA: 1:14 - batch: 2.0000 - size:
```

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2.0000 - loss: 0.1872 - rpn_class_loss: 4.9726e-04 - rpn_bbox_loss: 0.0412 -
mrcnn_class_loss: 0.0024 - mrcnn_bbox_loss: 0.0454 - mrcnn_mask_loss:
0.0978loading annotations into memory...
Done (t=0.02s)
creating index...
index created!
loading annotations into memory...
Done (t=0.01s)
creating index...
index created!
  6/100 [>...] - ETA: 1:15 - batch: 2.5000 - size:
2.0000 - loss: 0.1931 - rpn_class_loss: 7.4345e-04 - rpn_bbox_loss: 0.0485 -
mrcnn_class_loss: 0.0021 - mrcnn_bbox_loss: 0.0446 - mrcnn_mask_loss:
0.0971loading annotations into memory...
Done (t=0.01s)
creating index...
index created!
loading annotations into memory...
Done (t=0.01s)
creating index...
index created!
  7/100 [=>...] - ETA: 1:15 - batch: 3.0000 - size:
2.0000 - loss: 0.1871 - rpn_class_loss: 7.7322e-04 - rpn_bbox_loss: 0.0466 -
mrcnn_class_loss: 0.0023 - mrcnn_bbox_loss: 0.0420 - mrcnn_mask_loss:
0.0954loading annotations into memory...
Done (t=0.01s)
creating index...
index created!
loading annotations into memory...
Done (t=0.01s)
creating index...
index created!
  8/100 [=>...] - ETA: 1:13 - batch: 3.5000 - size:
2.0000 - loss: 0.1850 - rpn_class_loss: 7.1289e-04 - rpn_bbox_loss: 0.0462 -
mrcnn class loss: 0.0025 - mrcnn bbox loss: 0.0403 - mrcnn mask loss:
0.0953loading annotations into memory...
Done (t=0.01s)
creating index...
index created!
loading annotations into memory...
Done (t=0.01s)
creating index...
index created!
  9/100 [=>...] - ETA: 1:11 - batch: 4.0000 - size:
2.0000 - loss: 0.1818 - rpn_class_loss: 6.4106e-04 - rpn_bbox_loss: 0.0431 -
mrcnn_class_loss: 0.0027 - mrcnn_bbox_loss: 0.0427 - mrcnn_mask_loss:
0.0927loading annotations into memory...
Done (t=0.01s)
```

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creating index...
index created!
loading annotations into memory...
Done (t=0.01s)
creating index...
index created!
10/100 [==>...] - ETA: 1:10 - batch: 4.5000 - size:
2.0000 - loss: 0.1799 - rpn_class_loss: 6.1760e-04 - rpn_bbox_loss: 0.0416 -
mrcnn_class_loss: 0.0027 - mrcnn_bbox_loss: 0.0406 - mrcnn_mask_loss:
0.0943loading annotations into memory...
Done (t=0.01s)
creating index...
index created!
loading annotations into memory...
Done (t=0.01s)
creating index...
index created!
11/100 [==>...] - ETA: 1:08 - batch: 5.0000 - size:
2.0000 - loss: 0.1805 - rpn_class_loss: 0.0012 - rpn_bbox_loss: 0.0421 -
mrcnn_class_loss: 0.0029 - mrcnn_bbox_loss: 0.0391 - mrcnn_mask_loss: 0.0952
loading annotations into memory...
Done (t=0.01s)
creating index...
index created!
loading annotations into memory...
Done (t=0.01s)
creating index...
index created!
12/100 [==>...] - ETA: 1:07 - batch: 5.5000 - size:
2.0000 - loss: 0.1779 - rpn_class_loss: 0.0014 - rpn_bbox_loss: 0.0417 -
mrcnn_class_loss: 0.0027 - mrcnn_bbox_loss: 0.0368 - mrcnn_mask_loss:
0.0952loading annotations into memory...
Done (t=0.01s)
creating index...
index created!
loading annotations into memory...
Done (t=0.01s)
creating index...
index created!
13/100 [==>...] - ETA: 1:06 - batch: 6.0000 - size:
2.0000 - loss: 0.1729 - rpn_class_loss: 0.0016 - rpn_bbox_loss: 0.0397 -
mrcnn_class_loss: 0.0026 - mrcnn_bbox_loss: 0.0349 - mrcnn_mask_loss:
0.0941loading annotations into memory...
Done (t=0.01s)
creating index...
index created!
loading annotations into memory...
Done (t=0.01s)
```

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creating index...
index created!
14/100 [===>...] - ETA: 1:05 - batch: 6.5000 - size:
2.0000 - loss: 0.1678 - rpn_class_loss: 0.0015 - rpn_bbox_loss: 0.0380 -
mrcnn_class_loss: 0.0025 - mrcnn_bbox_loss: 0.0330 - mrcnn_mask_loss:
0.0927loading annotations into memory...
Done (t=0.01s)
creating index...
index created!
loading annotations into memory...
Done (t=0.01s)
creating index...
index created!
15/100 [===>...] - ETA: 1:04 - batch: 7.0000 - size:
2.0000 - loss: 0.1636 - rpn_class_loss: 0.0014 - rpn_bbox_loss: 0.0366 -
mrcnn_class_loss: 0.0023 - mrcnn_bbox_loss: 0.0317 - mrcnn_mask_loss:
0.0915loading annotations into memory...
Done (t=0.01s)
creating index...
index created!
loading annotations into memory...
Done (t=0.01s)
creating index...
index created!
16/100 [===>...] - ETA: 1:02 - batch: 7.5000 - size:
2.0000 - loss: 0.1633 - rpn_class_loss: 0.0014 - rpn_bbox_loss: 0.0361 -
mrcnn_class_loss: 0.0022 - mrcnn_bbox_loss: 0.0304 - mrcnn_mask_loss:
0.0932loading annotations into memory...
Done (t=0.01s)
creating index...
index created!
loading annotations into memory...
Done (t=0.01s)
creating index...
index created!
 17/100 [====>...] - ETA: 1:01 - batch: 8.0000 - size:
2.0000 - loss: 0.1618 - rpn class loss: 0.0014 - rpn bbox loss: 0.0355 -
mrcnn_class_loss: 0.0021 - mrcnn_bbox_loss: 0.0296 - mrcnn_mask_loss:
0.0933loading annotations into memory...
Done (t=0.01s)
creating index...
index created!
loading annotations into memory...
Done (t=0.01s)
creating index...
index created!
18/100 [====>...] - ETA: 1:01 - batch: 8.5000 - size:
2.0000 - loss: 0.1644 - rpn_class_loss: 0.0014 - rpn_bbox_loss: 0.0358 -
```

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mrcnn_class_loss: 0.0021 - mrcnn_bbox_loss: 0.0298 - mrcnn_mask_loss:
0.0953loading annotations into memory...
Done (t=0.01s)
creating index...
index created!
loading annotations into memory...
Done (t=0.01s)
creating index...
index created!
 19/100 [====>...] - ETA: 1:00 - batch: 9.0000 - size:
2.0000 - loss: 0.1637 - rpn_class_loss: 0.0014 - rpn_bbox_loss: 0.0347 -
mrcnn_class_loss: 0.0023 - mrcnn_bbox_loss: 0.0299 - mrcnn_mask_loss:
0.0955loading annotations into memory...
Done (t=0.01s)
creating index...
index created!
loading annotations into memory...
Done (t=0.01s)
creating index...
index created!
20/100 [====>...] - ETA: 59s - batch: 9.5000 - size:
2.0000 - loss: 0.1650 - rpn_class_loss: 0.0014 - rpn_bbox_loss: 0.0342 -
mrcnn_class_loss: 0.0024 - mrcnn_bbox_loss: 0.0316 - mrcnn_mask_loss: 0.0954
loading annotations into memory...
Done (t=0.01s)
creating index...
index created!
loading annotations into memory...
Done (t=0.01s)
creating index...
index created!
21/100 [====>...] - ETA: 58s - batch: 10.0000 - size:
2.0000 - loss: 0.1625 - rpn_class_loss: 0.0014 - rpn_bbox_loss: 0.0333 -
mrcnn_class_loss: 0.0025 - mrcnn_bbox_loss: 0.0307 - mrcnn_mask_loss:
0.0946loading annotations into memory...
Done (t=0.01s)
creating index...
index created!
loading annotations into memory...
Done (t=0.01s)
creating index...
index created!
22/100 [====>...] - ETA: 58s - batch: 10.5000 - size:
2.0000 - loss: 0.1620 - rpn_class_loss: 0.0014 - rpn_bbox_loss: 0.0329 -
mrcnn_class_loss: 0.0027 - mrcnn_bbox_loss: 0.0305 - mrcnn_mask_loss:
0.0946loading annotations into memory...
Done (t=0.01s)
creating index...
```

```
index created!
loading annotations into memory...
Done (t=0.01s)
creating index...
index created!
23/100 [====>...] - ETA: 57s - batch: 11.0000 - size:
2.0000 - loss: 0.1615 - rpn class loss: 0.0014 - rpn bbox loss: 0.0327 -
mrcnn_class_loss: 0.0027 - mrcnn_bbox_loss: 0.0302 - mrcnn_mask_loss:
0.0946loading annotations into memory...
Done (t=0.01s)
creating index...
index created!
loading annotations into memory...
Done (t=0.01s)
creating index...
index created!
24/100 [=====>...] - ETA: 57s - batch: 11.5000 - size:
2.0000 - loss: 0.1614 - rpn_class_loss: 0.0014 - rpn_bbox_loss: 0.0325 -
mrcnn_class_loss: 0.0026 - mrcnn_bbox_loss: 0.0301 - mrcnn_mask_loss:
0.0949loading annotations into memory...
Done (t=0.01s)
creating index...
index created!
loading annotations into memory...
Done (t=0.01s)
creating index...
index created!
25/100 [=====>...] - ETA: 57s - batch: 12.0000 - size:
2.0000 - loss: 0.1620 - rpn_class_loss: 0.0013 - rpn_bbox_loss: 0.0329 -
mrcnn_class_loss: 0.0027 - mrcnn_bbox_loss: 0.0305 - mrcnn_mask_loss:
0.0945loading annotations into memory...
Done (t=0.01s)
creating index...
index created!
loading annotations into memory...
Done (t=0.01s)
creating index...
index created!
26/100 [=====>...] - ETA: 56s - batch: 12.5000 - size:
2.0000 - loss: 0.1602 - rpn_class_loss: 0.0013 - rpn_bbox_loss: 0.0323 -
mrcnn_class_loss: 0.0028 - mrcnn_bbox_loss: 0.0297 - mrcnn_mask_loss:
0.0941loading annotations into memory...
Done (t=0.01s)
creating index...
index created!
loading annotations into memory...
Done (t=0.01s)
creating index...
```

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index created!
27/100 [======>...] - ETA: 55s - batch: 13.0000 - size:
2.0000 - loss: 0.1585 - rpn_class_loss: 0.0013 - rpn_bbox_loss: 0.0318 -
mrcnn_class_loss: 0.0027 - mrcnn_bbox_loss: 0.0292 - mrcnn_mask_loss:
0.0935loading annotations into memory...
Done (t=0.01s)
creating index...
index created!
loading annotations into memory...
Done (t=0.01s)
creating index...
index created!
28/100 [======>...] - ETA: 54s - batch: 13.5000 - size:
2.0000 - loss: 0.1566 - rpn_class_loss: 0.0013 - rpn_bbox_loss: 0.0311 -
mrcnn_class_loss: 0.0026 - mrcnn_bbox_loss: 0.0285 - mrcnn_mask_loss:
0.0931loading annotations into memory...
Done (t=0.01s)
creating index...
index created!
loading annotations into memory...
Done (t=0.01s)
creating index...
index created!
29/100 [======>...] - ETA: 53s - batch: 14.0000 - size:
2.0000 - loss: 0.1551 - rpn_class_loss: 0.0012 - rpn_bbox_loss: 0.0307 -
mrcnn_class_loss: 0.0027 - mrcnn_bbox_loss: 0.0282 - mrcnn_mask_loss:
0.0923loading annotations into memory...
Done (t=0.01s)
creating index...
index created!
loading annotations into memory...
Done (t=0.01s)
creating index...
index created!
30/100 [=======>...] - ETA: 52s - batch: 14.5000 - size:
2.0000 - loss: 0.1555 - rpn_class_loss: 0.0012 - rpn_bbox_loss: 0.0314 -
mrcnn_class_loss: 0.0026 - mrcnn_bbox_loss: 0.0280 - mrcnn_mask_loss:
0.0923loading annotations into memory...
Done (t=0.01s)
creating index...
index created!
loading annotations into memory...
Done (t=0.01s)
creating index...
index created!
31/100 [======>...] - ETA: 51s - batch: 15.0000 - size:
2.0000 - loss: 0.1552 - rpn_class_loss: 0.0012 - rpn_bbox_loss: 0.0310 -
mrcnn_class_loss: 0.0026 - mrcnn_bbox_loss: 0.0274 - mrcnn_mask_loss:
```

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0.0930loading annotations into memory...
Done (t=0.01s)
creating index...
index created!
loading annotations into memory...
Done (t=0.01s)
creating index...
index created!
32/100 [=======>...] - ETA: 51s - batch: 15.5000 - size:
2.0000 - loss: 0.1601 - rpn_class_loss: 0.0012 - rpn_bbox_loss: 0.0317 -
mrcnn_class loss: 0.0030 - mrcnn_bbox_loss: 0.0307 - mrcnn_mask loss:
0.0935loading annotations into memory...
Done (t=0.01s)
creating index...
index created!
loading annotations into memory...
Done (t=0.01s)
creating index...
index created!
33/100 [=======>...] - ETA: 50s - batch: 16.0000 - size:
2.0000 - loss: 0.1612 - rpn_class_loss: 0.0012 - rpn_bbox_loss: 0.0324 -
mrcnn_class_loss: 0.0029 - mrcnn_bbox_loss: 0.0310 - mrcnn_mask_loss:
0.0937loading annotations into memory...
Done (t=0.01s)
creating index...
index created!
loading annotations into memory...
Done (t=0.01s)
creating index...
index created!
34/100 [======>...] - ETA: 49s - batch: 16.5000 - size:
2.0000 - loss: 0.1608 - rpn_class_loss: 0.0012 - rpn_bbox_loss: 0.0324 -
mrcnn_class_loss: 0.0029 - mrcnn_bbox_loss: 0.0303 - mrcnn_mask_loss:
0.0941loading annotations into memory...
Done (t=0.01s)
creating index...
index created!
loading annotations into memory...
Done (t=0.01s)
creating index...
index created!
35/100 [=======>...] - ETA: 48s - batch: 17.0000 - size:
2.0000 - loss: 0.1599 - rpn_class_loss: 0.0011 - rpn_bbox_loss: 0.0322 -
mrcnn_class_loss: 0.0028 - mrcnn_bbox_loss: 0.0299 - mrcnn_mask_loss:
0.0939loading annotations into memory...
Done (t=0.01s)
creating index...
index created!
```

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loading annotations into memory...
Done (t=0.01s)
creating index...
index created!
36/100 [=======>...] - ETA: 47s - batch: 17.5000 - size:
2.0000 - loss: 0.1593 - rpn_class_loss: 0.0011 - rpn_bbox_loss: 0.0322 -
mrcnn class loss: 0.0028 - mrcnn bbox loss: 0.0295 - mrcnn mask loss:
0.0936loading annotations into memory...
Done (t=0.01s)
creating index...
index created!
loading annotations into memory...
Done (t=0.01s)
creating index...
index created!
37/100 [=======>...] - ETA: 46s - batch: 18.0000 - size:
2.0000 - loss: 0.1642 - rpn_class_loss: 0.0011 - rpn_bbox_loss: 0.0348 -
mrcnn_class_loss: 0.0029 - mrcnn_bbox_loss: 0.0310 - mrcnn_mask_loss:
0.0944loading annotations into memory...
Done (t=0.01s)
creating index...
index created!
loading annotations into memory...
Done (t=0.01s)
creating index...
index created!
38/100 [========>...] - ETA: 46s - batch: 18.5000 - size:
2.0000 - loss: 0.1631 - rpn_class_loss: 0.0011 - rpn_bbox_loss: 0.0347 -
mrcnn_class_loss: 0.0028 - mrcnn_bbox_loss: 0.0305 - mrcnn_mask_loss:
0.0940loading annotations into memory...
Done (t=0.01s)
creating index...
index created!
loading annotations into memory...
Done (t=0.01s)
creating index...
index created!
39/100 [=======>...] - ETA: 45s - batch: 19.0000 - size:
2.0000 - loss: 0.1635 - rpn_class_loss: 0.0012 - rpn_bbox_loss: 0.0343 -
mrcnn_class_loss: 0.0029 - mrcnn_bbox_loss: 0.0304 - mrcnn_mask_loss:
0.0947loading annotations into memory...
Done (t=0.01s)
creating index...
index created!
loading annotations into memory...
Done (t=0.01s)
creating index...
index created!
```

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40/100 [========>...] - ETA: 44s - batch: 19.5000 - size:
2.0000 - loss: 0.1644 - rpn_class_loss: 0.0012 - rpn_bbox_loss: 0.0348 -
mrcnn_class_loss: 0.0032 - mrcnn_bbox_loss: 0.0307 - mrcnn_mask_loss:
0.0945loading annotations into memory...
Done (t=0.01s)
creating index...
index created!
loading annotations into memory...
Done (t=0.01s)
creating index...
index created!
41/100 [========>...] - ETA: 43s - batch: 20.0000 - size:
2.0000 - loss: 0.1632 - rpn_class_loss: 0.0012 - rpn_bbox_loss: 0.0344 -
mrcnn_class_loss: 0.0031 - mrcnn_bbox_loss: 0.0302 - mrcnn_mask_loss:
0.0943loading annotations into memory...
Done (t=0.01s)
creating index...
index created!
loading annotations into memory...
Done (t=0.01s)
creating index...
index created!
42/100 [========>...] - ETA: 43s - batch: 20.5000 - size:
2.0000 - loss: 0.1623 - rpn_class_loss: 0.0011 - rpn_bbox_loss: 0.0342 -
mrcnn_class_loss: 0.0031 - mrcnn_bbox_loss: 0.0298 - mrcnn_mask_loss:
0.0940loading annotations into memory...
Done (t=0.01s)
creating index...
index created!
loading annotations into memory...
Done (t=0.02s)
creating index...
index created!
43/100 [========>...] - ETA: 42s - batch: 21.0000 - size:
2.0000 - loss: 0.1642 - rpn class loss: 0.0012 - rpn bbox loss: 0.0348 -
mrcnn_class_loss: 0.0032 - mrcnn_bbox_loss: 0.0312 - mrcnn_mask_loss:
0.0938loading annotations into memory...
Done (t=0.01s)
creating index...
index created!
loading annotations into memory...
Done (t=0.01s)
creating index...
index created!
44/100 [========>...] - ETA: 42s - batch: 21.5000 - size:
2.0000 - loss: 0.1645 - rpn_class_loss: 0.0012 - rpn_bbox_loss: 0.0347 -
mrcnn_class_loss: 0.0032 - mrcnn_bbox_loss: 0.0308 - mrcnn_mask_loss:
0.0946loading annotations into memory...
```

```
Done (t=0.01s)
creating index...
index created!
loading annotations into memory...
Done (t=0.01s)
creating index...
index created!
45/100 [=========>...] - ETA: 41s - batch: 22.0000 - size:
2.0000 - loss: 0.1629 - rpn_class_loss: 0.0012 - rpn_bbox_loss: 0.0343 -
mrcnn_class_loss: 0.0031 - mrcnn_bbox_loss: 0.0303 - mrcnn_mask_loss:
0.0941loading annotations into memory...
Done (t=0.01s)
creating index...
index created!
loading annotations into memory...
Done (t=0.01s)
creating index...
index created!
46/100 [=========>...] - ETA: 40s - batch: 22.5000 - size:
2.0000 - loss: 0.1630 - rpn_class_loss: 0.0012 - rpn_bbox_loss: 0.0342 -
mrcnn_class_loss: 0.0031 - mrcnn_bbox_loss: 0.0300 - mrcnn_mask_loss:
0.0946loading annotations into memory...
Done (t=0.01s)
creating index...
index created!
loading annotations into memory...
Done (t=0.01s)
creating index...
index created!
47/100 [=========>...] - ETA: 39s - batch: 23.0000 - size:
2.0000 - loss: 0.1625 - rpn_class_loss: 0.0011 - rpn_bbox_loss: 0.0339 -
mrcnn_class_loss: 0.0030 - mrcnn_bbox_loss: 0.0297 - mrcnn_mask_loss:
0.0948loading annotations into memory...
Done (t=0.01s)
creating index...
index created!
loading annotations into memory...
Done (t=0.01s)
creating index...
index created!
48/100 [=========>...] - ETA: 39s - batch: 23.5000 - size:
2.0000 - loss: 0.1620 - rpn_class_loss: 0.0011 - rpn_bbox_loss: 0.0336 -
mrcnn_class_loss: 0.0030 - mrcnn_bbox_loss: 0.0294 - mrcnn_mask_loss:
0.0949loading annotations into memory...
Done (t=0.01s)
creating index...
index created!
loading annotations into memory...
```

```
Done (t=0.01s)
creating index...
index created!
49/100 [========>...] - ETA: 38s - batch: 24.0000 - size:
2.0000 - loss: 0.1611 - rpn class loss: 0.0011 - rpn bbox loss: 0.0332 -
mrcnn_class_loss: 0.0029 - mrcnn_bbox_loss: 0.0292 - mrcnn_mask_loss:
0.0947loading annotations into memory...
Done (t=0.01s)
creating index...
index created!
loading annotations into memory...
Done (t=0.01s)
creating index...
index created!
2.0000 - loss: 0.1610 - rpn_class_loss: 0.0011 - rpn_bbox_loss: 0.0333 -
mrcnn_class_loss: 0.0029 - mrcnn_bbox_loss: 0.0290 - mrcnn_mask_loss:
0.0947loading annotations into memory...
Done (t=0.01s)
creating index...
index created!
loading annotations into memory...
Done (t=0.01s)
creating index...
index created!
51/100 [=========>...] - ETA: 36s - batch: 25.0000 - size:
2.0000 - loss: 0.1602 - rpn_class_loss: 0.0011 - rpn_bbox_loss: 0.0329 -
mrcnn_class_loss: 0.0029 - mrcnn_bbox_loss: 0.0287 - mrcnn_mask_loss:
0.0945loading annotations into memory...
Done (t=0.01s)
creating index...
index created!
loading annotations into memory...
Done (t=0.01s)
creating index...
index created!
2.0000 - loss: 0.1598 - rpn_class_loss: 0.0011 - rpn_bbox_loss: 0.0327 -
mrcnn_class_loss: 0.0029 - mrcnn_bbox_loss: 0.0286 - mrcnn_mask_loss:
0.0943loading annotations into memory...
Done (t=0.01s)
creating index...
index created!
loading annotations into memory...
Done (t=0.01s)
creating index...
index created!
```

```
2.0000 - loss: 0.1596 - rpn_class_loss: 0.0011 - rpn_bbox_loss: 0.0326 -
mrcnn_class_loss: 0.0029 - mrcnn_bbox_loss: 0.0288 - mrcnn_mask_loss:
0.0942loading annotations into memory...
Done (t=0.01s)
creating index...
index created!
loading annotations into memory...
Done (t=0.01s)
creating index...
index created!
2.0000 - loss: 0.1588 - rpn_class_loss: 0.0011 - rpn_bbox_loss: 0.0323 -
mrcnn_class_loss: 0.0029 - mrcnn_bbox_loss: 0.0285 - mrcnn_mask_loss:
0.0941loading annotations into memory...
Done (t=0.01s)
creating index...
index created!
loading annotations into memory...
Done (t=0.01s)
creating index...
index created!
2.0000 - loss: 0.1586 - rpn_class_loss: 0.0011 - rpn_bbox_loss: 0.0321 -
mrcnn_class_loss: 0.0029 - mrcnn_bbox_loss: 0.0283 - mrcnn_mask_loss:
0.0942loading annotations into memory...
Done (t=0.01s)
creating index...
index created!
loading annotations into memory...
Done (t=0.01s)
creating index...
index created!
2.0000 - loss: 0.1584 - rpn_class_loss: 0.0011 - rpn_bbox_loss: 0.0320 -
mrcnn class loss: 0.0029 - mrcnn bbox loss: 0.0281 - mrcnn mask loss:
0.0943loading annotations into memory...
Done (t=0.01s)
creating index...
index created!
loading annotations into memory...
Done (t=0.01s)
creating index...
index created!
2.0000 - loss: 0.1576 - rpn_class_loss: 0.0011 - rpn_bbox_loss: 0.0316 -
mrcnn_class_loss: 0.0029 - mrcnn_bbox_loss: 0.0279 - mrcnn_mask_loss:
0.0941loading annotations into memory...
Done (t=0.01s)
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creating index...
index created!
loading annotations into memory...
Done (t=0.01s)
creating index...
index created!
2.0000 - loss: 0.1569 - rpn_class_loss: 0.0011 - rpn_bbox_loss: 0.0313 -
mrcnn_class_loss: 0.0030 - mrcnn_bbox_loss: 0.0276 - mrcnn_mask_loss:
0.0939loading annotations into memory...
Done (t=0.01s)
creating index...
index created!
loading annotations into memory...
Done (t=0.01s)
creating index...
index created!
2.0000 - loss: 0.1567 - rpn_class_loss: 0.0011 - rpn_bbox_loss: 0.0311 -
mrcnn_class_loss: 0.0029 - mrcnn_bbox_loss: 0.0275 - mrcnn_mask_loss:
0.0941loading annotations into memory...
Done (t=0.01s)
creating index...
index created!
loading annotations into memory...
Done (t=0.01s)
creating index...
index created!
2.0000 - loss: 0.1562 - rpn_class_loss: 0.0011 - rpn_bbox_loss: 0.0308 -
mrcnn_class_loss: 0.0030 - mrcnn_bbox_loss: 0.0271 - mrcnn_mask_loss:
0.0942loading annotations into memory...
Done (t=0.01s)
creating index...
index created!
loading annotations into memory...
Done (t=0.01s)
creating index...
index created!
2.0000 - loss: 0.1566 - rpn_class_loss: 0.0012 - rpn_bbox_loss: 0.0307 -
mrcnn_class_loss: 0.0031 - mrcnn_bbox_loss: 0.0272 - mrcnn_mask_loss:
0.0944loading annotations into memory...
Done (t=0.01s)
creating index...
index created!
loading annotations into memory...
Done (t=0.01s)
```

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creating index...
index created!
2.0000 - loss: 0.1564 - rpn_class_loss: 0.0012 - rpn_bbox_loss: 0.0309 -
mrcnn class loss: 0.0032 - mrcnn bbox loss: 0.0271 - mrcnn mask loss:
0.0941loading annotations into memory...
Done (t=0.01s)
creating index...
index created!
loading annotations into memory...
Done (t=0.01s)
creating index...
index created!
2.0000 - loss: 0.1563 - rpn_class_loss: 0.0011 - rpn_bbox_loss: 0.0309 -
mrcnn_class_loss: 0.0032 - mrcnn_bbox_loss: 0.0270 - mrcnn_mask_loss:
0.0940loading annotations into memory...
Done (t=0.01s)
creating index...
index created!
loading annotations into memory...
Done (t=0.01s)
creating index...
index created!
2.0000 - loss: 0.1556 - rpn_class_loss: 0.0011 - rpn_bbox_loss: 0.0307 -
mrcnn_class_loss: 0.0032 - mrcnn_bbox_loss: 0.0267 - mrcnn_mask_loss:
0.0938loading annotations into memory...
Done (t=0.01s)
creating index...
index created!
loading annotations into memory...
Done (t=0.01s)
creating index...
index created!
2.0000 - loss: 0.1560 - rpn_class_loss: 0.0011 - rpn_bbox_loss: 0.0308 -
mrcnn_class_loss: 0.0032 - mrcnn_bbox_loss: 0.0268 - mrcnn_mask_loss:
0.0941loading annotations into memory...
Done (t=0.01s)
creating index...
index created!
loading annotations into memory...
Done (t=0.01s)
creating index...
index created!
2.0000 - loss: 0.1555 - rpn_class_loss: 0.0011 - rpn_bbox_loss: 0.0306 -
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mrcnn_class_loss: 0.0032 - mrcnn_bbox_loss: 0.0265 - mrcnn_mask_loss:
0.0941loading annotations into memory...
Done (t=0.01s)
creating index...
index created!
loading annotations into memory...
Done (t=0.01s)
creating index...
index created!
2.0000 - loss: 0.1577 - rpn_class_loss: 0.0011 - rpn_bbox_loss: 0.0306 -
mrcnn_class_loss: 0.0035 - mrcnn_bbox_loss: 0.0284 - mrcnn_mask_loss:
0.0940loading annotations into memory...
Done (t=0.01s)
creating index...
index created!
loading annotations into memory...
Done (t=0.01s)
creating index...
index created!
2.0000 - loss: 0.1577 - rpn_class_loss: 0.0011 - rpn_bbox_loss: 0.0304 -
mrcnn_class_loss: 0.0035 - mrcnn_bbox_loss: 0.0286 - mrcnn_mask_loss:
0.0941loading annotations into memory...
Done (t=0.01s)
creating index...
index created!
loading annotations into memory...
Done (t=0.01s)
creating index...
index created!
2.0000 - loss: 0.1574 - rpn_class_loss: 0.0011 - rpn_bbox_loss: 0.0303 -
mrcnn_class_loss: 0.0035 - mrcnn_bbox_loss: 0.0283 - mrcnn_mask_loss:
0.0941loading annotations into memory...
Done (t=0.01s)
creating index...
index created!
loading annotations into memory...
Done (t=0.01s)
creating index...
index created!
2.0000 - loss: 0.1579 - rpn_class_loss: 0.0011 - rpn_bbox_loss: 0.0303 -
mrcnn_class_loss: 0.0035 - mrcnn_bbox_loss: 0.0285 - mrcnn_mask_loss:
0.0945loading annotations into memory...
Done (t=0.01s)
creating index...
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index created!
loading annotations into memory...
Done (t=0.01s)
creating index...
index created!
2.0000 - loss: 0.1576 - rpn class loss: 0.0011 - rpn bbox loss: 0.0302 -
mrcnn_class_loss: 0.0035 - mrcnn_bbox_loss: 0.0283 - mrcnn_mask_loss:
0.0945loading annotations into memory...
Done (t=0.01s)
creating index...
index created!
loading annotations into memory...
Done (t=0.01s)
creating index...
index created!
2.0000 - loss: 0.1578 - rpn_class_loss: 0.0011 - rpn_bbox_loss: 0.0301 -
mrcnn_class_loss: 0.0034 - mrcnn_bbox_loss: 0.0282 - mrcnn_mask_loss:
0.0949loading annotations into memory...
Done (t=0.01s)
creating index...
index created!
loading annotations into memory...
Done (t=0.01s)
creating index...
index created!
2.0000 - loss: 0.1576 - rpn_class_loss: 0.0011 - rpn_bbox_loss: 0.0301 -
mrcnn_class_loss: 0.0034 - mrcnn_bbox_loss: 0.0282 - mrcnn_mask_loss:
0.0948loading annotations into memory...
Done (t=0.01s)
creating index...
index created!
loading annotations into memory...
Done (t=0.01s)
creating index...
index created!
2.0000 - loss: 0.1576 - rpn_class_loss: 0.0011 - rpn_bbox_loss: 0.0301 -
mrcnn_class_loss: 0.0034 - mrcnn_bbox_loss: 0.0281 - mrcnn_mask_loss:
0.0949loading annotations into memory...
Done (t=0.01s)
creating index...
index created!
loading annotations into memory...
Done (t=0.01s)
creating index...
```

```
index created!
2.0000 - loss: 0.1592 - rpn_class_loss: 0.0011 - rpn_bbox_loss: 0.0303 -
mrcnn_class_loss: 0.0035 - mrcnn_bbox_loss: 0.0287 - mrcnn_mask_loss:
0.0956loading annotations into memory...
Done (t=0.01s)
creating index...
index created!
loading annotations into memory...
Done (t=0.01s)
creating index...
index created!
2.0000 - loss: 0.1591 - rpn_class_loss: 0.0011 - rpn_bbox_loss: 0.0302 -
mrcnn_class_loss: 0.0035 - mrcnn_bbox_loss: 0.0289 - mrcnn_mask_loss:
0.0954loading annotations into memory...
Done (t=0.01s)
creating index...
index created!
loading annotations into memory...
Done (t=0.01s)
creating index...
index created!
2.0000 - loss: 0.1587 - rpn_class_loss: 0.0011 - rpn_bbox_loss: 0.0301 -
mrcnn_class_loss: 0.0035 - mrcnn_bbox_loss: 0.0286 - mrcnn_mask_loss:
0.0953loading annotations into memory...
Done (t=0.01s)
creating index...
index created!
loading annotations into memory...
Done (t=0.01s)
creating index...
index created!
2.0000 - loss: 0.1584 - rpn_class_loss: 0.0011 - rpn_bbox_loss: 0.0301 -
mrcnn_class_loss: 0.0035 - mrcnn_bbox_loss: 0.0285 - mrcnn_mask_loss:
0.0952loading annotations into memory...
Done (t=0.01s)
creating index...
index created!
loading annotations into memory...
Done (t=0.01s)
creating index...
index created!
2.0000 - loss: 0.1584 - rpn_class_loss: 0.0011 - rpn_bbox_loss: 0.0301 -
mrcnn_class_loss: 0.0034 - mrcnn_bbox_loss: 0.0287 - mrcnn_mask_loss:
```

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0.0951loading annotations into memory...
Done (t=0.02s)
creating index...
index created!
loading annotations into memory...
Done (t=0.01s)
creating index...
index created!
2.0000 - loss: 0.1582 - rpn_class_loss: 0.0011 - rpn_bbox_loss: 0.0301 -
mrcnn_class_loss: 0.0034 - mrcnn_bbox_loss: 0.0284 - mrcnn_mask_loss:
0.0953loading annotations into memory...
Done (t=0.01s)
creating index...
index created!
loading annotations into memory...
Done (t=0.01s)
creating index...
index created!
2.0000 - loss: 0.1577 - rpn_class_loss: 0.0011 - rpn_bbox_loss: 0.0299 -
mrcnn_class_loss: 0.0034 - mrcnn_bbox_loss: 0.0282 - mrcnn_mask_loss:
0.0951loading annotations into memory...
Done (t=0.01s)
creating index...
index created!
loading annotations into memory...
Done (t=0.01s)
creating index...
index created!
2.0000 - loss: 0.1587 - rpn_class_loss: 0.0011 - rpn_bbox_loss: 0.0304 -
mrcnn_class_loss: 0.0033 - mrcnn_bbox_loss: 0.0286 - mrcnn_mask_loss:
0.0953loading annotations into memory...
Done (t=0.01s)
creating index...
index created!
loading annotations into memory...
Done (t=0.01s)
creating index...
index created!
2.0000 - loss: 0.1588 - rpn_class_loss: 0.0011 - rpn_bbox_loss: 0.0302 -
mrcnn_class_loss: 0.0033 - mrcnn_bbox_loss: 0.0286 - mrcnn_mask_loss:
0.0956loading annotations into memory...
Done (t=0.02s)
creating index...
index created!
```

```
loading annotations into memory...
Done (t=0.01s)
creating index...
index created!
2.0000 - loss: 0.1585 - rpn_class_loss: 0.0011 - rpn_bbox_loss: 0.0301 -
mrcnn class loss: 0.0033 - mrcnn bbox loss: 0.0285 - mrcnn mask loss:
0.0955loading annotations into memory...
Done (t=0.01s)
creating index...
index created!
loading annotations into memory...
Done (t=0.01s)
creating index...
index created!
2.0000 - loss: 0.1592 - rpn_class_loss: 0.0011 - rpn_bbox_loss: 0.0310 -
mrcnn_class_loss: 0.0033 - mrcnn_bbox_loss: 0.0283 - mrcnn_mask_loss:
0.0954loading annotations into memory...
Done (t=0.01s)
creating index...
index created!
loading annotations into memory...
Done (t=0.01s)
creating index...
index created!
2.0000 - loss: 0.1603 - rpn_class_loss: 0.0011 - rpn_bbox_loss: 0.0313 -
mrcnn_class_loss: 0.0033 - mrcnn_bbox_loss: 0.0290 - mrcnn_mask_loss:
0.0956loading annotations into memory...
Done (t=0.01s)
creating index...
index created!
loading annotations into memory...
Done (t=0.01s)
creating index...
index created!
2.0000 - loss: 0.1598 - rpn_class_loss: 0.0011 - rpn_bbox_loss: 0.0313 -
mrcnn_class_loss: 0.0033 - mrcnn_bbox_loss: 0.0288 - mrcnn_mask_loss: 0.0954
loading annotations into memory...
Done (t=0.01s)
creating index...
index created!
loading annotations into memory...
Done (t=0.01s)
creating index...
index created!
```

```
2.0000 - loss: 0.1592 - rpn_class_loss: 0.0011 - rpn_bbox_loss: 0.0311 -
mrcnn_class_loss: 0.0032 - mrcnn_bbox_loss: 0.0286 - mrcnn_mask_loss:
0.0952loading annotations into memory...
Done (t=0.01s)
creating index...
index created!
loading annotations into memory...
Done (t=0.01s)
creating index...
index created!
2.0000 - loss: 0.1591 - rpn_class_loss: 0.0011 - rpn_bbox_loss: 0.0310 -
mrcnn_class_loss: 0.0032 - mrcnn_bbox_loss: 0.0285 - mrcnn_mask_loss:
0.0953loading annotations into memory...
Done (t=0.01s)
creating index...
index created!
loading annotations into memory...
Done (t=0.01s)
creating index...
index created!
2.0000 - loss: 0.1588 - rpn_class_loss: 0.0011 - rpn_bbox_loss: 0.0311 -
mrcnn_class_loss: 0.0032 - mrcnn_bbox_loss: 0.0283 - mrcnn_mask_loss:
0.0952loading annotations into memory...
Done (t=0.01s)
creating index...
index created!
loading annotations into memory...
Done (t=0.01s)
creating index...
index created!
2.0000 - loss: 0.1647 - rpn class loss: 0.0011 - rpn bbox loss: 0.0338 -
mrcnn_class_loss: 0.0033 - mrcnn_bbox_loss: 0.0313 - mrcnn_mask_loss:
0.0952loading annotations into memory...
Done (t=0.01s)
creating index...
index created!
loading annotations into memory...
Done (t=0.01s)
creating index...
index created!
2.0000 - loss: 0.1643 - rpn_class_loss: 0.0011 - rpn_bbox_loss: 0.0337 -
mrcnn_class_loss: 0.0033 - mrcnn_bbox_loss: 0.0312 - mrcnn_mask_loss:
0.0951loading annotations into memory...
```

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Done (t=0.01s)
creating index...
index created!
loading annotations into memory...
Done (t=0.01s)
creating index...
index created!
2.0000 - loss: 0.1638 - rpn_class_loss: 0.0011 - rpn_bbox_loss: 0.0335 -
mrcnn_class_loss: 0.0032 - mrcnn_bbox_loss: 0.0310 - mrcnn_mask_loss:
0.0950loading annotations into memory...
Done (t=0.01s)
creating index...
index created!
loading annotations into memory...
Done (t=0.01s)
creating index...
index created!
2.0000 - loss: 0.1633 - rpn_class_loss: 0.0011 - rpn_bbox_loss: 0.0333 -
mrcnn_class_loss: 0.0032 - mrcnn_bbox_loss: 0.0308 - mrcnn_mask_loss:
0.0950loading annotations into memory...
Done (t=0.01s)
creating index...
index created!
loading annotations into memory...
Done (t=0.01s)
creating index...
index created!
2.0000 - loss: 0.1630 - rpn_class_loss: 0.0011 - rpn_bbox_loss: 0.0331 -
mrcnn_class_loss: 0.0032 - mrcnn_bbox_loss: 0.0307 - mrcnn_mask_loss:
0.0948loading annotations into memory...
Done (t=0.01s)
creating index...
index created!
loading annotations into memory...
Done (t=0.01s)
creating index...
index created!
2.0000 - loss: 0.1629 - rpn_class_loss: 0.0011 - rpn_bbox_loss: 0.0331 -
mrcnn_class_loss: 0.0032 - mrcnn_bbox_loss: 0.0306 - mrcnn_mask_loss:
0.0949loading annotations into memory...
Done (t=0.01s)
creating index...
index created!
loading annotations into memory...
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Done (t=0.01s)
creating index...
index created!
2.0000 - loss: 0.1628 - rpn class loss: 0.0011 - rpn bbox loss: 0.0329 -
mrcnn_class_loss: 0.0033 - mrcnn_bbox_loss: 0.0305 - mrcnn_mask_loss:
0.0951loading annotations into memory...
Done (t=0.01s)
creating index...
index created!
loading annotations into memory...
Done (t=0.02s)
creating index...
index created!
2.0000 - loss: 0.1628 - rpn_class_loss: 0.0011 - rpn_bbox_loss: 0.0328 -
mrcnn_class_loss: 0.0033 - mrcnn_bbox_loss: 0.0306 - mrcnn_mask_loss:
0.0951loading annotations into memory...
Done (t=0.01s)
creating index...
index created!
loading annotations into memory...
Done (t=0.01s)
creating index...
index created!
2.0000 - loss: 0.1632 - rpn_class_loss: 0.0011 - rpn_bbox_loss: 0.0327 -
mrcnn_class_loss: 0.0033 - mrcnn_bbox_loss: 0.0307 - mrcnn_mask_loss:
0.0954loading annotations into memory...
Done (t=0.01s)
creating index...
index created!
loading annotations into memory...
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creating index...
index created!
100/100 [============== ] - ETA: Os - batch: 49.5000 - size:
2.0000 - loss: 0.1629 - rpn_class_loss: 0.0011 - rpn_bbox_loss: 0.0326 -
mrcnn_class_loss: 0.0033 - mrcnn_bbox_loss: 0.0306 - mrcnn_mask_loss:
0.0954loading annotations into memory...
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Done (t=0.00s)

creating index...

index created!

loading annotations into memory...

Done (t=0.00s)

creating index...

index created!

loading annotations into memory...

Done (t=0.00s)

creating index...

index created!

loading annotations into memory...

Done (t=0.00s)

creating index...

index created!

loading annotations into memory...

Done (t=0.00s)

creating index...

index created!

loading annotations into memory...

Done (t=0.00s)

creating index...

index created!

loading annotations into memory...

Done (t=0.00s)

creating index...

index created!

creating index...

index created!

loading annotations into memory...

Done (t=0.00s)

creating index...

index created!

loading annotations into memory...

Done (t=0.00s)

creating index...

index created!

loading annotations into memory...

Done (t=0.00s)

creating index...

index created!

loading annotations into memory...

Done (t=0.00s)

creating index...

index created!

loading annotations into memory...

Done (t=0.00s)

creating index...

index created!

loading annotations into memory...

Done (t=0.00s)

creating index...

index created!

loading annotations into memory...

Done (t=0.00s)

creating index...

index created!

loading annotations into memory...

Done (t=0.00s)

creating index...

index created!

loading annotations into memory...

Done (t=0.00s)

creating index...

index created!

loading annotations into memory...

Done (t=0.00s)

creating index...

index created!

loading annotations into memory...

Done (t=0.00s)

creating index...

index created!

```
Done (t=0.01s)
creating index...
index created!
loading annotations into memory...
Done (t=0.00s)
creating index...
index created!
2.0000 - loss: 0.1629 - rpn_class_loss: 0.0011 - rpn_bbox_loss: 0.0326 -
mrcnn_class_loss: 0.0033 - mrcnn_bbox_loss: 0.0306 - mrcnn_mask_loss: 0.0954 -
val_loss: 0.8790 - val_rpn_class_loss: 0.0203 - val_rpn_bbox_loss: 0.5205 -
val_mrcnn_class_loss: 0.0115 - val_mrcnn_bbox_loss: 0.1283 -
val_mrcnn_mask_loss: 0.1985
Epoch 10/10
loading annotations into memory...
Done (t=0.01s)
creating index...
index created!
loading annotations into memory...
Done (t=0.01s)
creating index...
index created!
  1/100 [...] - ETA: 1:12 - batch: 0.0000e+00 - size:
2.0000 - loss: 0.1572 - rpn_class_loss: 0.0012 - rpn_bbox_loss: 0.0213 -
mrcnn_class_loss: 0.0041 - mrcnn_bbox_loss: 0.0157 - mrcnn_mask_loss:
0.1149loading annotations into memory...
Done (t=0.01s)
creating index...
index created!
loading annotations into memory...
Done (t=0.01s)
creating index...
index created!
  2/100 [...] - ETA: 1:09 - batch: 0.5000 - size:
2.0000 - loss: 0.1602 - rpn class loss: 8.6465e-04 - rpn bbox loss: 0.0263 -
mrcnn_class_loss: 0.0030 - mrcnn_bbox_loss: 0.0240 - mrcnn_mask_loss:
0.1061loading annotations into memory...
Done (t=0.01s)
creating index...
index created!
loading annotations into memory...
Done (t=0.01s)
creating index...
index created!
  3/100 [...] - ETA: 1:08 - batch: 1.0000 - size:
2.0000 - loss: 0.1449 - rpn_class_loss: 9.4219e-04 - rpn_bbox_loss: 0.0221 -
mrcnn_class_loss: 0.0042 - mrcnn_bbox_loss: 0.0176 - mrcnn_mask_loss:
0.1001loading annotations into memory...
```

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Done (t=0.01s)
creating index...
index created!
loading annotations into memory...
Done (t=0.01s)
creating index...
index created!
  4/100 [>...] - ETA: 1:08 - batch: 1.5000 - size:
2.0000 - loss: 0.1382 - rpn_class_loss: 8.4328e-04 - rpn_bbox_loss: 0.0205 -
mrcnn_class_loss: 0.0039 - mrcnn_bbox_loss: 0.0170 - mrcnn_mask_loss:
0.0960loading annotations into memory...
Done (t=0.01s)
creating index...
index created!
loading annotations into memory...
Done (t=0.01s)
creating index...
index created!
  5/100 [>...] - ETA: 1:07 - batch: 2.0000 - size:
2.0000 - loss: 0.1387 - rpn_class_loss: 7.6993e-04 - rpn_bbox_loss: 0.0212 -
mrcnn_class_loss: 0.0043 - mrcnn_bbox_loss: 0.0195 - mrcnn_mask_loss:
0.0930loading annotations into memory...
Done (t=0.01s)
creating index...
index created!
loading annotations into memory...
Done (t=0.01s)
creating index...
index created!
  6/100 [>...] - ETA: 1:06 - batch: 2.5000 - size:
2.0000 - loss: 0.1417 - rpn_class_loss: 7.3549e-04 - rpn_bbox_loss: 0.0254 -
mrcnn_class_loss: 0.0043 - mrcnn_bbox_loss: 0.0199 - mrcnn_mask_loss:
0.0913loading annotations into memory...
Done (t=0.01s)
creating index...
index created!
loading annotations into memory...
Done (t=0.01s)
creating index...
index created!
  7/100 [=>...] - ETA: 1:05 - batch: 3.0000 - size:
2.0000 - loss: 0.1466 - rpn_class_loss: 7.4501e-04 - rpn_bbox_loss: 0.0241 -
mrcnn_class_loss: 0.0068 - mrcnn_bbox_loss: 0.0207 - mrcnn_mask_loss:
0.0943loading annotations into memory...
Done (t=0.01s)
creating index...
index created!
loading annotations into memory...
```

```
Done (t=0.01s)
creating index...
index created!
  8/100 [=>...] - ETA: 1:05 - batch: 3.5000 - size:
2.0000 - loss: 0.1439 - rpn class loss: 8.5928e-04 - rpn bbox loss: 0.0238 -
mrcnn_class_loss: 0.0071 - mrcnn_bbox_loss: 0.0195 - mrcnn_mask_loss:
0.0926loading annotations into memory...
Done (t=0.01s)
creating index...
index created!
loading annotations into memory...
Done (t=0.01s)
creating index...
index created!
  9/100 [=>...] - ETA: 1:04 - batch: 4.0000 - size:
2.0000 - loss: 0.1410 - rpn_class_loss: 8.9519e-04 - rpn_bbox_loss: 0.0228 -
mrcnn_class_loss: 0.0064 - mrcnn_bbox_loss: 0.0186 - mrcnn_mask_loss:
0.0922loading annotations into memory...
Done (t=0.01s)
creating index...
index created!
loading annotations into memory...
Done (t=0.01s)
creating index...
index created!
10/100 [==>...] - ETA: 1:03 - batch: 4.5000 - size:
2.0000 - loss: 0.1423 - rpn_class_loss: 8.1786e-04 - rpn_bbox_loss: 0.0227 -
mrcnn_class_loss: 0.0062 - mrcnn_bbox_loss: 0.0190 - mrcnn_mask_loss:
0.0937loading annotations into memory...
Done (t=0.01s)
creating index...
index created!
loading annotations into memory...
Done (t=0.01s)
creating index...
index created!
11/100 [==>...] - ETA: 1:03 - batch: 5.0000 - size:
2.0000 - loss: 0.1443 - rpn_class_loss: 9.1425e-04 - rpn_bbox_loss: 0.0228 -
mrcnn_class_loss: 0.0066 - mrcnn_bbox_loss: 0.0196 - mrcnn_mask_loss:
0.0943loading annotations into memory...
Done (t=0.01s)
creating index...
index created!
loading annotations into memory...
Done (t=0.01s)
creating index...
index created!
 12/100 [==>...] - ETA: 1:02 - batch: 5.5000 - size:
```

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2.0000 - loss: 0.1441 - rpn_class_loss: 8.6773e-04 - rpn_bbox_loss: 0.0230 -
mrcnn_class_loss: 0.0062 - mrcnn_bbox_loss: 0.0190 - mrcnn_mask_loss:
0.0950loading annotations into memory...
Done (t=0.01s)
creating index...
index created!
loading annotations into memory...
Done (t=0.01s)
creating index...
index created!
13/100 [==>...] - ETA: 1:01 - batch: 6.0000 - size:
2.0000 - loss: 0.1412 - rpn_class_loss: 8.5001e-04 - rpn_bbox_loss: 0.0223 -
mrcnn_class_loss: 0.0059 - mrcnn_bbox_loss: 0.0182 - mrcnn_mask_loss:
0.0940loading annotations into memory...
Done (t=0.01s)
creating index...
index created!
loading annotations into memory...
Done (t=0.01s)
creating index...
index created!
 14/100 [===>...] - ETA: 1:02 - batch: 6.5000 - size:
2.0000 - loss: 0.1392 - rpn_class_loss: 8.8415e-04 - rpn_bbox_loss: 0.0219 -
mrcnn_class_loss: 0.0057 - mrcnn_bbox_loss: 0.0174 - mrcnn_mask_loss:
0.0933loading annotations into memory...
Done (t=0.01s)
creating index...
index created!
loading annotations into memory...
Done (t=0.01s)
creating index...
index created!
15/100 [===>...] - ETA: 1:02 - batch: 7.0000 - size:
2.0000 - loss: 0.1384 - rpn_class_loss: 8.7962e-04 - rpn_bbox_loss: 0.0221 -
mrcnn class loss: 0.0056 - mrcnn bbox loss: 0.0168 - mrcnn mask loss:
0.0930loading annotations into memory...
Done (t=0.02s)
creating index...
index created!
loading annotations into memory...
Done (t=0.01s)
creating index...
index created!
16/100 [===>...] - ETA: 1:02 - batch: 7.5000 - size:
2.0000 - loss: 0.1392 - rpn_class_loss: 8.8834e-04 - rpn_bbox_loss: 0.0216 -
mrcnn_class_loss: 0.0059 - mrcnn_bbox_loss: 0.0165 - mrcnn_mask_loss:
0.0943loading annotations into memory...
Done (t=0.01s)
```

```
creating index...
index created!
loading annotations into memory...
Done (t=0.03s)
creating index...
index created!
17/100 [====>...] - ETA: 1:02 - batch: 8.0000 - size:
2.0000 - loss: 0.1419 - rpn_class_loss: 8.6369e-04 - rpn_bbox_loss: 0.0221 -
mrcnn_class_loss: 0.0057 - mrcnn_bbox_loss: 0.0176 - mrcnn_mask_loss:
0.0957loading annotations into memory...
Done (t=0.01s)
creating index...
index created!
loading annotations into memory...
Done (t=0.01s)
creating index...
index created!
18/100 [====>...] - ETA: 1:01 - batch: 8.5000 - size:
2.0000 - loss: 0.1425 - rpn_class_loss: 9.0972e-04 - rpn_bbox_loss: 0.0219 -
mrcnn_class_loss: 0.0056 - mrcnn_bbox_loss: 0.0180 - mrcnn_mask_loss:
0.0962loading annotations into memory...
Done (t=0.01s)
creating index...
index created!
loading annotations into memory...
Done (t=0.01s)
creating index...
index created!
19/100 [====>...] - ETA: 1:00 - batch: 9.0000 - size:
2.0000 - loss: 0.1526 - rpn_class_loss: 0.0010 - rpn_bbox_loss: 0.0276 -
mrcnn_class_loss: 0.0060 - mrcnn_bbox_loss: 0.0217 - mrcnn_mask_loss: 0.0963
loading annotations into memory...
Done (t=0.01s)
creating index...
index created!
loading annotations into memory...
Done (t=0.01s)
creating index...
index created!
20/100 [====>...] - ETA: 59s - batch: 9.5000 - size:
2.0000 - loss: 0.1516 - rpn_class_loss: 0.0010 - rpn_bbox_loss: 0.0276 -
mrcnn_class loss: 0.0059 - mrcnn_bbox_loss: 0.0211 - mrcnn_mask_loss: 0.0960
loading annotations into memory...
Done (t=0.01s)
creating index...
index created!
loading annotations into memory...
Done (t=0.01s)
```

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creating index...
index created!
21/100 [====>...] - ETA: 58s - batch: 10.0000 - size:
2.0000 - loss: 0.1515 - rpn_class_loss: 9.8495e-04 - rpn_bbox_loss: 0.0276 -
mrcnn class loss: 0.0057 - mrcnn bbox loss: 0.0211 - mrcnn mask loss:
0.0961loading annotations into memory...
Done (t=0.01s)
creating index...
index created!
loading annotations into memory...
Done (t=0.01s)
creating index...
index created!
22/100 [====>...] - ETA: 57s - batch: 10.5000 - size:
2.0000 - loss: 0.1507 - rpn_class_loss: 9.8666e-04 - rpn_bbox_loss: 0.0270 -
mrcnn_class_loss: 0.0055 - mrcnn_bbox_loss: 0.0207 - mrcnn_mask_loss:
0.0965loading annotations into memory...
Done (t=0.01s)
creating index...
index created!
loading annotations into memory...
Done (t=0.01s)
creating index...
index created!
23/100 [====>...] - ETA: 56s - batch: 11.0000 - size:
2.0000 - loss: 0.1506 - rpn_class_loss: 9.5934e-04 - rpn_bbox_loss: 0.0274 -
mrcnn_class_loss: 0.0053 - mrcnn_bbox_loss: 0.0203 - mrcnn_mask_loss:
0.0966loading annotations into memory...
Done (t=0.01s)
creating index...
index created!
loading annotations into memory...
Done (t=0.01s)
creating index...
index created!
24/100 [=====>...] - ETA: 56s - batch: 11.5000 - size:
2.0000 - loss: 0.1513 - rpn class loss: 9.6294e-04 - rpn bbox loss: 0.0278 -
mrcnn_class_loss: 0.0053 - mrcnn_bbox_loss: 0.0204 - mrcnn_mask_loss:
0.0968loading annotations into memory...
Done (t=0.01s)
creating index...
index created!
loading annotations into memory...
Done (t=0.01s)
creating index...
index created!
25/100 [=====>...] - ETA: 55s - batch: 12.0000 - size:
2.0000 - loss: 0.1517 - rpn_class_loss: 9.2868e-04 - rpn_bbox_loss: 0.0283 -
```

```
mrcnn_class_loss: 0.0052 - mrcnn_bbox_loss: 0.0208 - mrcnn_mask_loss:
0.0965loading annotations into memory...
Done (t=0.01s)
creating index...
index created!
loading annotations into memory...
Done (t=0.01s)
creating index...
index created!
26/100 [=====>...] - ETA: 54s - batch: 12.5000 - size:
2.0000 - loss: 0.1497 - rpn_class_loss: 9.1420e-04 - rpn_bbox_loss: 0.0276 -
mrcnn_class_loss: 0.0051 - mrcnn_bbox_loss: 0.0203 - mrcnn_mask_loss:
0.0958loading annotations into memory...
Done (t=0.01s)
creating index...
index created!
loading annotations into memory...
Done (t=0.01s)
creating index...
index created!
27/100 [======>...] - ETA: 53s - batch: 13.0000 - size:
2.0000 - loss: 0.1498 - rpn_class_loss: 8.8556e-04 - rpn_bbox_loss: 0.0278 -
mrcnn_class_loss: 0.0050 - mrcnn_bbox_loss: 0.0206 - mrcnn_mask_loss:
0.0955loading annotations into memory...
Done (t=0.01s)
creating index...
index created!
loading annotations into memory...
Done (t=0.01s)
creating index...
index created!
28/100 [======>...] - ETA: 52s - batch: 13.5000 - size:
2.0000 - loss: 0.1509 - rpn_class_loss: 8.7428e-04 - rpn_bbox_loss: 0.0281 -
mrcnn_class_loss: 0.0050 - mrcnn_bbox_loss: 0.0205 - mrcnn_mask_loss:
0.0964loading annotations into memory...
Done (t=0.01s)
creating index...
index created!
loading annotations into memory...
Done (t=0.01s)
creating index...
index created!
29/100 [======>...] - ETA: 52s - batch: 14.0000 - size:
2.0000 - loss: 0.1497 - rpn_class_loss: 8.7238e-04 - rpn_bbox_loss: 0.0276 -
mrcnn_class_loss: 0.0049 - mrcnn_bbox_loss: 0.0201 - mrcnn_mask_loss:
0.0962loading annotations into memory...
Done (t=0.01s)
creating index...
```

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index created!
loading annotations into memory...
Done (t=0.01s)
creating index...
index created!
30/100 [======>...] - ETA: 51s - batch: 14.5000 - size:
2.0000 - loss: 0.1499 - rpn_class_loss: 8.8052e-04 - rpn_bbox_loss: 0.0276 -
mrcnn_class_loss: 0.0047 - mrcnn_bbox_loss: 0.0199 - mrcnn_mask_loss:
0.0968loading annotations into memory...
Done (t=0.01s)
creating index...
index created!
loading annotations into memory...
Done (t=0.01s)
creating index...
index created!
31/100 [======>...] - ETA: 50s - batch: 15.0000 - size:
2.0000 - loss: 0.1506 - rpn_class_loss: 8.8525e-04 - rpn_bbox_loss: 0.0279 -
mrcnn_class_loss: 0.0046 - mrcnn_bbox_loss: 0.0202 - mrcnn_mask_loss:
0.0970loading annotations into memory...
Done (t=0.01s)
creating index...
index created!
loading annotations into memory...
Done (t=0.01s)
creating index...
index created!
32/100 [======>...] - ETA: 50s - batch: 15.5000 - size:
2.0000 - loss: 0.1498 - rpn_class_loss: 8.9009e-04 - rpn_bbox_loss: 0.0277 -
mrcnn_class_loss: 0.0045 - mrcnn_bbox_loss: 0.0200 - mrcnn_mask_loss:
0.0966loading annotations into memory...
Done (t=0.01s)
creating index...
index created!
loading annotations into memory...
Done (t=0.01s)
creating index...
index created!
33/100 [======>...] - ETA: 49s - batch: 16.0000 - size:
2.0000 - loss: 0.1519 - rpn_class_loss: 9.3438e-04 - rpn_bbox_loss: 0.0276 -
mrcnn_class_loss: 0.0044 - mrcnn_bbox_loss: 0.0226 - mrcnn_mask_loss:
0.0963loading annotations into memory...
Done (t=0.01s)
creating index...
index created!
loading annotations into memory...
Done (t=0.01s)
creating index...
```

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index created!
34/100 [======>...] - ETA: 49s - batch: 16.5000 - size:
2.0000 - loss: 0.1510 - rpn_class_loss: 9.2378e-04 - rpn_bbox_loss: 0.0272 -
mrcnn_class_loss: 0.0043 - mrcnn_bbox_loss: 0.0223 - mrcnn_mask_loss:
0.0964loading annotations into memory...
Done (t=0.01s)
creating index...
index created!
loading annotations into memory...
Done (t=0.01s)
creating index...
index created!
35/100 [======>...] - ETA: 48s - batch: 17.0000 - size:
2.0000 - loss: 0.1501 - rpn_class_loss: 9.1418e-04 - rpn_bbox_loss: 0.0270 -
mrcnn_class_loss: 0.0042 - mrcnn_bbox_loss: 0.0221 - mrcnn_mask_loss:
0.0958loading annotations into memory...
Done (t=0.01s)
creating index...
index created!
loading annotations into memory...
Done (t=0.01s)
creating index...
index created!
36/100 [======>...] - ETA: 48s - batch: 17.5000 - size:
2.0000 - loss: 0.1493 - rpn_class_loss: 8.9707e-04 - rpn_bbox_loss: 0.0271 -
mrcnn_class_loss: 0.0041 - mrcnn_bbox_loss: 0.0222 - mrcnn_mask_loss:
0.0950loading annotations into memory...
Done (t=0.01s)
creating index...
index created!
loading annotations into memory...
Done (t=0.01s)
creating index...
index created!
37/100 [========>...] - ETA: 47s - batch: 18.0000 - size:
2.0000 - loss: 0.1487 - rpn_class_loss: 8.9368e-04 - rpn_bbox_loss: 0.0270 -
mrcnn_class_loss: 0.0040 - mrcnn_bbox_loss: 0.0218 - mrcnn_mask_loss:
0.0950loading annotations into memory...
Done (t=0.01s)
creating index...
index created!
loading annotations into memory...
Done (t=0.01s)
creating index...
index created!
38/100 [========>...] - ETA: 46s - batch: 18.5000 - size:
2.0000 - loss: 0.1479 - rpn_class_loss: 8.9405e-04 - rpn_bbox_loss: 0.0270 -
mrcnn_class_loss: 0.0039 - mrcnn_bbox_loss: 0.0214 - mrcnn_mask_loss:
```

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0.0947loading annotations into memory...
Done (t=0.01s)
creating index...
index created!
loading annotations into memory...
Done (t=0.01s)
creating index...
index created!
39/100 [=======>...] - ETA: 45s - batch: 19.0000 - size:
2.0000 - loss: 0.1486 - rpn_class_loss: 8.8158e-04 - rpn_bbox_loss: 0.0272 -
mrcnn_class_loss: 0.0038 - mrcnn_bbox_loss: 0.0211 - mrcnn_mask_loss:
0.0956loading annotations into memory...
Done (t=0.01s)
creating index...
index created!
loading annotations into memory...
Done (t=0.01s)
creating index...
index created!
40/100 [========>...] - ETA: 44s - batch: 19.5000 - size:
2.0000 - loss: 0.1482 - rpn_class_loss: 8.7801e-04 - rpn_bbox_loss: 0.0272 -
mrcnn_class_loss: 0.0038 - mrcnn_bbox_loss: 0.0208 - mrcnn_mask_loss:
0.0955loading annotations into memory...
Done (t=0.01s)
creating index...
index created!
loading annotations into memory...
Done (t=0.01s)
creating index...
index created!
41/100 [========>...] - ETA: 44s - batch: 20.0000 - size:
2.0000 - loss: 0.1483 - rpn_class_loss: 8.6657e-04 - rpn_bbox_loss: 0.0280 -
mrcnn_class_loss: 0.0037 - mrcnn_bbox_loss: 0.0208 - mrcnn_mask_loss:
0.0948loading annotations into memory...
Done (t=0.01s)
creating index...
index created!
loading annotations into memory...
Done (t=0.01s)
creating index...
index created!
42/100 [========>...] - ETA: 43s - batch: 20.5000 - size:
2.0000 - loss: 0.1492 - rpn_class_loss: 8.5167e-04 - rpn_bbox_loss: 0.0287 -
mrcnn_class_loss: 0.0036 - mrcnn_bbox_loss: 0.0209 - mrcnn_mask_loss:
0.0951loading annotations into memory...
Done (t=0.01s)
creating index...
index created!
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loading annotations into memory...
Done (t=0.01s)
creating index...
index created!
43/100 [=========>...] - ETA: 42s - batch: 21.0000 - size:
2.0000 - loss: 0.1490 - rpn_class_loss: 8.3478e-04 - rpn_bbox_loss: 0.0286 -
mrcnn_class_loss: 0.0036 - mrcnn_bbox_loss: 0.0207 - mrcnn_mask_loss:
0.0953loading annotations into memory...
Done (t=0.01s)
creating index...
index created!
loading annotations into memory...
Done (t=0.01s)
creating index...
index created!
44/100 [========>...] - ETA: 41s - batch: 21.5000 - size:
2.0000 - loss: 0.1486 - rpn_class_loss: 8.2555e-04 - rpn_bbox_loss: 0.0286 -
mrcnn_class_loss: 0.0035 - mrcnn_bbox_loss: 0.0204 - mrcnn_mask_loss:
0.0953loading annotations into memory...
Done (t=0.01s)
creating index...
index created!
loading annotations into memory...
Done (t=0.01s)
creating index...
index created!
45/100 [========>...] - ETA: 40s - batch: 22.0000 - size:
2.0000 - loss: 0.1489 - rpn_class_loss: 8.1994e-04 - rpn_bbox_loss: 0.0286 -
mrcnn_class_loss: 0.0034 - mrcnn_bbox_loss: 0.0204 - mrcnn_mask_loss:
0.0957loading annotations into memory...
Done (t=0.01s)
creating index...
index created!
loading annotations into memory...
Done (t=0.01s)
creating index...
index created!
46/100 [=========>...] - ETA: 40s - batch: 22.5000 - size:
2.0000 - loss: 0.1491 - rpn_class_loss: 8.0897e-04 - rpn_bbox_loss: 0.0286 -
mrcnn_class_loss: 0.0034 - mrcnn_bbox_loss: 0.0203 - mrcnn_mask_loss:
0.0961loading annotations into memory...
Done (t=0.01s)
creating index...
index created!
loading annotations into memory...
Done (t=0.01s)
creating index...
index created!
```

```
47/100 [=========>...] - ETA: 39s - batch: 23.0000 - size:
2.0000 - loss: 0.1495 - rpn_class_loss: 7.9312e-04 - rpn_bbox_loss: 0.0286 -
mrcnn_class_loss: 0.0033 - mrcnn_bbox_loss: 0.0209 - mrcnn_mask_loss:
0.0958loading annotations into memory...
Done (t=0.01s)
creating index...
index created!
loading annotations into memory...
Done (t=0.01s)
creating index...
index created!
2.0000 - loss: 0.1491 - rpn_class_loss: 7.9064e-04 - rpn_bbox_loss: 0.0285 -
mrcnn_class_loss: 0.0033 - mrcnn_bbox_loss: 0.0208 - mrcnn_mask_loss:
0.0957loading annotations into memory...
Done (t=0.01s)
creating index...
index created!
loading annotations into memory...
Done (t=0.01s)
creating index...
index created!
2.0000 - loss: 0.1487 - rpn_class_loss: 7.8025e-04 - rpn_bbox_loss: 0.0283 -
mrcnn_class_loss: 0.0032 - mrcnn_bbox_loss: 0.0206 - mrcnn_mask_loss:
0.0958loading annotations into memory...
Done (t=0.01s)
creating index...
index created!
loading annotations into memory...
Done (t=0.01s)
creating index...
index created!
2.0000 - loss: 0.1516 - rpn class loss: 8.1848e-04 - rpn bbox loss: 0.0289 -
mrcnn_class_loss: 0.0034 - mrcnn_bbox_loss: 0.0227 - mrcnn_mask_loss:
0.0958loading annotations into memory...
Done (t=0.01s)
creating index...
index created!
loading annotations into memory...
Done (t=0.01s)
creating index...
index created!
2.0000 - loss: 0.1517 - rpn_class_loss: 8.1239e-04 - rpn_bbox_loss: 0.0291 -
mrcnn_class_loss: 0.0034 - mrcnn_bbox_loss: 0.0224 - mrcnn_mask_loss:
0.0960loading annotations into memory...
```

```
Done (t=0.01s)
creating index...
index created!
loading annotations into memory...
Done (t=0.01s)
creating index...
index created!
2.0000 - loss: 0.1528 - rpn_class_loss: 8.4172e-04 - rpn_bbox_loss: 0.0294 -
mrcnn_class_loss: 0.0036 - mrcnn_bbox_loss: 0.0230 - mrcnn_mask_loss:
0.0959loading annotations into memory...
Done (t=0.01s)
creating index...
index created!
loading annotations into memory...
Done (t=0.01s)
creating index...
index created!
2.0000 - loss: 0.1525 - rpn_class_loss: 8.4113e-04 - rpn_bbox_loss: 0.0293 -
mrcnn_class_loss: 0.0035 - mrcnn_bbox_loss: 0.0228 - mrcnn_mask_loss:
0.0960loading annotations into memory...
Done (t=0.01s)
creating index...
index created!
loading annotations into memory...
Done (t=0.01s)
creating index...
index created!
2.0000 - loss: 0.1526 - rpn_class_loss: 8.2961e-04 - rpn_bbox_loss: 0.0296 -
mrcnn_class_loss: 0.0035 - mrcnn_bbox_loss: 0.0232 - mrcnn_mask_loss:
0.0956loading annotations into memory...
Done (t=0.01s)
creating index...
index created!
loading annotations into memory...
Done (t=0.01s)
creating index...
index created!
55/100 [=========>...] - ETA: 33s - batch: 27.0000 - size:
2.0000 - loss: 0.1524 - rpn_class_loss: 8.2542e-04 - rpn_bbox_loss: 0.0295 -
mrcnn_class_loss: 0.0034 - mrcnn_bbox_loss: 0.0231 - mrcnn_mask_loss:
0.0955loading annotations into memory...
Done (t=0.01s)
creating index...
index created!
loading annotations into memory...
```

```
Done (t=0.01s)
creating index...
index created!
2.0000 - loss: 0.1525 - rpn class loss: 8.2698e-04 - rpn bbox loss: 0.0298 -
mrcnn_class_loss: 0.0035 - mrcnn_bbox_loss: 0.0231 - mrcnn_mask_loss:
0.0954loading annotations into memory...
Done (t=0.01s)
creating index...
index created!
loading annotations into memory...
Done (t=0.01s)
creating index...
index created!
2.0000 - loss: 0.1518 - rpn_class_loss: 8.4073e-04 - rpn_bbox_loss: 0.0295 -
mrcnn_class_loss: 0.0034 - mrcnn_bbox_loss: 0.0228 - mrcnn_mask_loss:
0.0952loading annotations into memory...
Done (t=0.01s)
creating index...
index created!
loading annotations into memory...
Done (t=0.02s)
creating index...
index created!
2.0000 - loss: 0.1524 - rpn_class_loss: 8.3380e-04 - rpn_bbox_loss: 0.0299 -
mrcnn_class_loss: 0.0033 - mrcnn_bbox_loss: 0.0229 - mrcnn_mask_loss:
0.0954loading annotations into memory...
Done (t=0.01s)
creating index...
index created!
loading annotations into memory...
Done (t=0.01s)
creating index...
index created!
2.0000 - loss: 0.1518 - rpn_class_loss: 8.2991e-04 - rpn_bbox_loss: 0.0296 -
mrcnn_class_loss: 0.0034 - mrcnn_bbox_loss: 0.0227 - mrcnn_mask_loss:
0.0953loading annotations into memory...
Done (t=0.01s)
creating index...
index created!
loading annotations into memory...
Done (t=0.01s)
creating index...
index created!
```

```
2.0000 - loss: 0.1514 - rpn_class_loss: 8.3548e-04 - rpn_bbox_loss: 0.0294 -
mrcnn_class_loss: 0.0034 - mrcnn_bbox_loss: 0.0227 - mrcnn_mask_loss:
0.0950loading annotations into memory...
Done (t=0.01s)
creating index...
index created!
loading annotations into memory...
Done (t=0.01s)
creating index...
index created!
2.0000 - loss: 0.1511 - rpn_class_loss: 8.2726e-04 - rpn_bbox_loss: 0.0292 -
mrcnn_class_loss: 0.0034 - mrcnn_bbox_loss: 0.0225 - mrcnn_mask_loss:
0.0951loading annotations into memory...
Done (t=0.01s)
creating index...
index created!
loading annotations into memory...
Done (t=0.01s)
creating index...
index created!
2.0000 - loss: 0.1524 - rpn_class_loss: 8.4378e-04 - rpn_bbox_loss: 0.0300 -
mrcnn_class_loss: 0.0036 - mrcnn_bbox_loss: 0.0226 - mrcnn_mask_loss:
0.0954loading annotations into memory...
Done (t=0.01s)
creating index...
index created!
loading annotations into memory...
Done (t=0.01s)
creating index...
index created!
2.0000 - loss: 0.1531 - rpn_class_loss: 8.3885e-04 - rpn_bbox_loss: 0.0300 -
mrcnn class loss: 0.0035 - mrcnn bbox loss: 0.0236 - mrcnn mask loss:
0.0952loading annotations into memory...
Done (t=0.01s)
creating index...
index created!
loading annotations into memory...
Done (t=0.01s)
creating index...
index created!
2.0000 - loss: 0.1556 - rpn_class_loss: 8.6617e-04 - rpn_bbox_loss: 0.0299 -
mrcnn_class_loss: 0.0037 - mrcnn_bbox_loss: 0.0258 - mrcnn_mask_loss:
0.0953loading annotations into memory...
Done (t=0.01s)
```

```
creating index...
index created!
loading annotations into memory...
Done (t=0.01s)
creating index...
index created!
2.0000 - loss: 0.1551 - rpn_class_loss: 8.6065e-04 - rpn_bbox_loss: 0.0297 -
mrcnn_class_loss: 0.0037 - mrcnn_bbox_loss: 0.0258 - mrcnn_mask_loss:
0.0949loading annotations into memory...
Done (t=0.01s)
creating index...
index created!
loading annotations into memory...
Done (t=0.01s)
creating index...
index created!
2.0000 - loss: 0.1558 - rpn_class_loss: 8.5002e-04 - rpn_bbox_loss: 0.0300 -
mrcnn_class_loss: 0.0037 - mrcnn_bbox_loss: 0.0266 - mrcnn_mask_loss:
0.0946loading annotations into memory...
Done (t=0.01s)
creating index...
index created!
loading annotations into memory...
Done (t=0.01s)
creating index...
index created!
2.0000 - loss: 0.1556 - rpn_class_loss: 8.5028e-04 - rpn_bbox_loss: 0.0300 -
mrcnn_class_loss: 0.0037 - mrcnn_bbox_loss: 0.0266 - mrcnn_mask_loss:
0.0946loading annotations into memory...
Done (t=0.01s)
creating index...
index created!
loading annotations into memory...
Done (t=0.01s)
creating index...
index created!
2.0000 - loss: 0.1561 - rpn_class_loss: 8.3902e-04 - rpn_bbox_loss: 0.0301 -
mrcnn_class_loss: 0.0036 - mrcnn_bbox_loss: 0.0269 - mrcnn_mask_loss:
0.0946loading annotations into memory...
Done (t=0.02s)
creating index...
index created!
loading annotations into memory...
Done (t=0.01s)
```

```
creating index...
index created!
2.0000 - loss: 0.1555 - rpn_class_loss: 8.5185e-04 - rpn_bbox_loss: 0.0300 -
mrcnn_class_loss: 0.0036 - mrcnn_bbox_loss: 0.0266 - mrcnn_mask_loss:
0.0945loading annotations into memory...
Done (t=0.01s)
creating index...
index created!
loading annotations into memory...
Done (t=0.01s)
creating index...
index created!
2.0000 - loss: 0.1555 - rpn_class_loss: 8.4230e-04 - rpn_bbox_loss: 0.0301 -
mrcnn_class_loss: 0.0035 - mrcnn_bbox_loss: 0.0265 - mrcnn_mask_loss:
0.0945loading annotations into memory...
Done (t=0.01s)
creating index...
index created!
loading annotations into memory...
Done (t=0.01s)
creating index...
index created!
2.0000 - loss: 0.1558 - rpn_class_loss: 8.3279e-04 - rpn_bbox_loss: 0.0304 -
mrcnn_class_loss: 0.0035 - mrcnn_bbox_loss: 0.0265 - mrcnn_mask_loss:
0.0946loading annotations into memory...
Done (t=0.02s)
creating index...
index created!
loading annotations into memory...
Done (t=0.01s)
creating index...
index created!
2.0000 - loss: 0.1556 - rpn class loss: 8.3474e-04 - rpn bbox loss: 0.0307 -
mrcnn_class_loss: 0.0035 - mrcnn_bbox_loss: 0.0262 - mrcnn_mask_loss:
0.0944loading annotations into memory...
Done (t=0.01s)
creating index...
index created!
loading annotations into memory...
Done (t=0.01s)
creating index...
index created!
2.0000 - loss: 0.1556 - rpn_class_loss: 8.3102e-04 - rpn_bbox_loss: 0.0307 -
```

```
mrcnn_class_loss: 0.0034 - mrcnn_bbox_loss: 0.0261 - mrcnn_mask_loss:
0.0945loading annotations into memory...
Done (t=0.01s)
creating index...
index created!
loading annotations into memory...
Done (t=0.01s)
creating index...
index created!
2.0000 - loss: 0.1554 - rpn_class_loss: 8.2758e-04 - rpn_bbox_loss: 0.0307 -
mrcnn_class_loss: 0.0034 - mrcnn_bbox_loss: 0.0260 - mrcnn_mask_loss:
0.0945loading annotations into memory...
Done (t=0.01s)
creating index...
index created!
loading annotations into memory...
Done (t=0.01s)
creating index...
index created!
2.0000 - loss: 0.1551 - rpn_class_loss: 8.2335e-04 - rpn_bbox_loss: 0.0306 -
mrcnn_class_loss: 0.0033 - mrcnn_bbox_loss: 0.0259 - mrcnn_mask_loss:
0.0945loading annotations into memory...
Done (t=0.01s)
creating index...
index created!
loading annotations into memory...
Done (t=0.01s)
creating index...
index created!
2.0000 - loss: 0.1556 - rpn_class_loss: 8.4891e-04 - rpn_bbox_loss: 0.0308 -
mrcnn_class_loss: 0.0033 - mrcnn_bbox_loss: 0.0262 - mrcnn_mask_loss:
0.0945loading annotations into memory...
Done (t=0.01s)
creating index...
index created!
loading annotations into memory...
Done (t=0.01s)
creating index...
index created!
2.0000 - loss: 0.1557 - rpn_class_loss: 8.4103e-04 - rpn_bbox_loss: 0.0310 -
mrcnn_class_loss: 0.0033 - mrcnn_bbox_loss: 0.0264 - mrcnn_mask_loss:
0.0942loading annotations into memory...
Done (t=0.01s)
creating index...
```

```
index created!
loading annotations into memory...
Done (t=0.02s)
creating index...
index created!
2.0000 - loss: 0.1555 - rpn class loss: 8.3218e-04 - rpn bbox loss: 0.0310 -
mrcnn_class_loss: 0.0032 - mrcnn_bbox_loss: 0.0263 - mrcnn_mask_loss:
0.0942loading annotations into memory...
Done (t=0.01s)
creating index...
index created!
loading annotations into memory...
Done (t=0.01s)
creating index...
index created!
2.0000 - loss: 0.1557 - rpn_class_loss: 8.2731e-04 - rpn_bbox_loss: 0.0312 -
mrcnn_class_loss: 0.0032 - mrcnn_bbox_loss: 0.0262 - mrcnn_mask_loss:
0.0943loading annotations into memory...
Done (t=0.01s)
creating index...
index created!
loading annotations into memory...
Done (t=0.01s)
creating index...
index created!
2.0000 - loss: 0.1566 - rpn_class_loss: 8.2250e-04 - rpn_bbox_loss: 0.0316 -
mrcnn_class_loss: 0.0032 - mrcnn_bbox_loss: 0.0264 - mrcnn_mask_loss:
0.0946loading annotations into memory...
Done (t=0.01s)
creating index...
index created!
loading annotations into memory...
Done (t=0.01s)
creating index...
index created!
2.0000 - loss: 0.1563 - rpn_class_loss: 8.2623e-04 - rpn_bbox_loss: 0.0317 -
mrcnn_class_loss: 0.0031 - mrcnn_bbox_loss: 0.0262 - mrcnn_mask_loss:
0.0945loading annotations into memory...
Done (t=0.01s)
creating index...
index created!
loading annotations into memory...
Done (t=0.01s)
creating index...
```

```
index created!
2.0000 - loss: 0.1584 - rpn_class_loss: 8.2059e-04 - rpn_bbox_loss: 0.0332 -
mrcnn_class_loss: 0.0032 - mrcnn_bbox_loss: 0.0267 - mrcnn_mask_loss:
0.0944loading annotations into memory...
Done (t=0.01s)
creating index...
index created!
loading annotations into memory...
Done (t=0.01s)
creating index...
index created!
2.0000 - loss: 0.1585 - rpn_class_loss: 8.1719e-04 - rpn_bbox_loss: 0.0334 -
mrcnn_class_loss: 0.0032 - mrcnn_bbox_loss: 0.0267 - mrcnn_mask_loss:
0.0944loading annotations into memory...
Done (t=0.01s)
creating index...
index created!
loading annotations into memory...
Done (t=0.01s)
creating index...
index created!
2.0000 - loss: 0.1588 - rpn_class_loss: 8.2350e-04 - rpn_bbox_loss: 0.0339 -
mrcnn_class_loss: 0.0032 - mrcnn_bbox_loss: 0.0267 - mrcnn_mask_loss:
0.0942loading annotations into memory...
Done (t=0.01s)
creating index...
index created!
loading annotations into memory...
Done (t=0.01s)
creating index...
index created!
2.0000 - loss: 0.1586 - rpn_class_loss: 8.2194e-04 - rpn_bbox_loss: 0.0339 -
mrcnn_class_loss: 0.0031 - mrcnn_bbox_loss: 0.0268 - mrcnn_mask_loss:
0.0940loading annotations into memory...
Done (t=0.01s)
creating index...
index created!
loading annotations into memory...
Done (t=0.01s)
creating index...
index created!
2.0000 - loss: 0.1585 - rpn_class_loss: 8.1825e-04 - rpn_bbox_loss: 0.0340 -
mrcnn_class_loss: 0.0031 - mrcnn_bbox_loss: 0.0267 - mrcnn_mask_loss:
```

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0.0940loading annotations into memory...
Done (t=0.01s)
creating index...
index created!
loading annotations into memory...
Done (t=0.02s)
creating index...
index created!
2.0000 - loss: 0.1584 - rpn_class_loss: 8.3299e-04 - rpn_bbox_loss: 0.0338 -
mrcnn_class loss: 0.0031 - mrcnn_bbox_loss: 0.0266 - mrcnn_mask_loss: 0.0940
loading annotations into memory...
Done (t=0.01s)
creating index...
index created!
loading annotations into memory...
Done (t=0.01s)
creating index...
index created!
2.0000 - loss: 0.1581 - rpn_class_loss: 8.3715e-04 - rpn_bbox_loss: 0.0337 -
mrcnn_class_loss: 0.0031 - mrcnn_bbox_loss: 0.0267 - mrcnn_mask_loss:
0.0937loading annotations into memory...
Done (t=0.01s)
creating index...
index created!
loading annotations into memory...
Done (t=0.01s)
creating index...
index created!
2.0000 - loss: 0.1580 - rpn_class_loss: 8.3785e-04 - rpn_bbox_loss: 0.0338 -
mrcnn_class_loss: 0.0031 - mrcnn_bbox_loss: 0.0266 - mrcnn_mask_loss:
0.0937loading annotations into memory...
Done (t=0.01s)
creating index...
index created!
loading annotations into memory...
Done (t=0.01s)
creating index...
index created!
2.0000 - loss: 0.1588 - rpn_class_loss: 8.4898e-04 - rpn_bbox_loss: 0.0338 -
mrcnn_class_loss: 0.0030 - mrcnn_bbox_loss: 0.0267 - mrcnn_mask_loss:
0.0944loading annotations into memory...
Done (t=0.01s)
creating index...
index created!
```

```
loading annotations into memory...
Done (t=0.01s)
creating index...
index created!
2.0000 - loss: 0.1590 - rpn_class_loss: 8.4474e-04 - rpn_bbox_loss: 0.0336 -
mrcnn_class_loss: 0.0030 - mrcnn_bbox_loss: 0.0270 - mrcnn_mask_loss:
0.0945loading annotations into memory...
Done (t=0.01s)
creating index...
index created!
loading annotations into memory...
Done (t=0.01s)
creating index...
index created!
2.0000 - loss: 0.1591 - rpn_class_loss: 8.4665e-04 - rpn_bbox_loss: 0.0338 -
mrcnn_class_loss: 0.0030 - mrcnn_bbox_loss: 0.0271 - mrcnn_mask_loss:
0.0944loading annotations into memory...
Done (t=0.01s)
creating index...
index created!
loading annotations into memory...
Done (t=0.01s)
creating index...
index created!
2.0000 - loss: 0.1595 - rpn_class_loss: 8.4375e-04 - rpn_bbox_loss: 0.0339 -
mrcnn_class_loss: 0.0030 - mrcnn_bbox_loss: 0.0275 - mrcnn_mask_loss:
0.0943loading annotations into memory...
Done (t=0.01s)
creating index...
index created!
loading annotations into memory...
Done (t=0.01s)
creating index...
index created!
2.0000 - loss: 0.1593 - rpn_class_loss: 8.5507e-04 - rpn_bbox_loss: 0.0337 -
mrcnn_class_loss: 0.0030 - mrcnn_bbox_loss: 0.0274 - mrcnn_mask_loss:
0.0944loading annotations into memory...
Done (t=0.01s)
creating index...
index created!
loading annotations into memory...
Done (t=0.01s)
creating index...
index created!
```

```
2.0000 - loss: 0.1591 - rpn_class_loss: 8.6190e-04 - rpn_bbox_loss: 0.0336 -
mrcnn_class_loss: 0.0030 - mrcnn_bbox_loss: 0.0273 - mrcnn_mask_loss:
0.0944loading annotations into memory...
Done (t=0.01s)
creating index...
index created!
loading annotations into memory...
Done (t=0.01s)
creating index...
index created!
2.0000 - loss: 0.1589 - rpn_class_loss: 8.7109e-04 - rpn_bbox_loss: 0.0336 -
mrcnn_class_loss: 0.0029 - mrcnn_bbox_loss: 0.0272 - mrcnn_mask_loss:
0.0942loading annotations into memory...
Done (t=0.01s)
creating index...
index created!
loading annotations into memory...
Done (t=0.01s)
creating index...
index created!
2.0000 - loss: 0.1586 - rpn_class_loss: 8.7582e-04 - rpn_bbox_loss: 0.0336 -
mrcnn_class_loss: 0.0029 - mrcnn_bbox_loss: 0.0271 - mrcnn_mask_loss:
0.0942loading annotations into memory...
Done (t=0.01s)
creating index...
index created!
loading annotations into memory...
Done (t=0.01s)
creating index...
index created!
2.0000 - loss: 0.1583 - rpn class loss: 8.8117e-04 - rpn bbox loss: 0.0335 -
mrcnn_class_loss: 0.0029 - mrcnn_bbox_loss: 0.0271 - mrcnn_mask_loss:
0.0939loading annotations into memory...
Done (t=0.02s)
creating index...
index created!
loading annotations into memory...
Done (t=0.01s)
creating index...
index created!
2.0000 - loss: 0.1585 - rpn_class_loss: 8.8448e-04 - rpn_bbox_loss: 0.0339 -
mrcnn_class_loss: 0.0029 - mrcnn_bbox_loss: 0.0270 - mrcnn_mask_loss:
0.0938loading annotations into memory...
```

```
Done (t=0.01s)
creating index...
index created!
loading annotations into memory...
Done (t=0.01s)
creating index...
index created!
2.0000 - loss: 0.1588 - rpn_class_loss: 8.8565e-04 - rpn_bbox_loss: 0.0342 -
mrcnn_class_loss: 0.0028 - mrcnn_bbox_loss: 0.0270 - mrcnn_mask_loss:
0.0938loading annotations into memory...
Done (t=0.00s)
creating index...
index created!
loading annotations into memory...
Done (t=0.00s)
creating index...
index created!
loading annotations into memory...
Done (t=0.00s)
creating index...
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loading annotations into memory...
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loading annotations into memory...
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loading annotations into memory...
Done (t=0.00s)
creating index...
index created!
loading annotations into memory...
Done (t=0.00s)
creating index...
index created!
loading annotations into memory...
Done (t=0.00s)
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index created!

loading annotations into memory...

Done (t=0.00s)

creating index...

index created!

loading annotations into memory...

Done (t=0.00s)

creating index...

index created!

loading annotations into memory...

Done (t=0.00s)

creating index...

index created!

loading annotations into memory...

Done (t=0.00s)

creating index...

index created!

loading annotations into memory...

Done (t=0.00s)

creating index...

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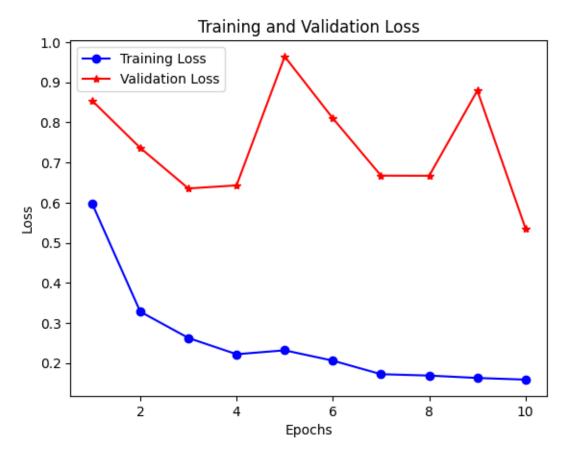
creating index...

index created!

loading annotations into memory...

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     Done (t=0.00s)
     creating index...
     index created!
     loading annotations into memory...
     Done (t=0.00s)
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     Done (t=0.00s)
     creating index...
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     loading annotations into memory...
     Done (t=0.00s)
     creating index...
     index created!
     2.0000 - loss: 0.1588 - rpn_class_loss: 8.8565e-04 - rpn_bbox_loss: 0.0342 -
     mrcnn_class loss: 0.0028 - mrcnn bbox_loss: 0.0270 - mrcnn_mask_loss: 0.0938 -
     val_loss: 0.5359 - val_rpn_class_loss: 0.0108 - val_rpn_bbox_loss: 0.3200 -
     val_mrcnn_class_loss: 0.0033 - val_mrcnn_bbox_loss: 0.0666 -
     val_mrcnn_mask_loss: 0.1352
[50]: history_path = os.path.join('/content', 'training_logs.txt')
     with open(history_path, 'w') as log_file:
         log_file.write(str(model.keras_model.history.history))  # Save training_
      ⇔history
      # Step 5: Generate a Plot of Losses (Manual Implementation)
     import matplotlib.pyplot as plt
     loss = model.keras_model.history.history['loss']
     val loss = model.keras model.history.history['val loss']
     epochs = range(1, len(loss) + 1)
     plt.figure()
     plt.plot(epochs, loss, 'bo-', label='Training Loss')
```

```
plt.plot(epochs, val_loss, 'r*-', label='Validation Loss')
plt.title('Training and Validation Loss')
plt.xlabel('Epochs')
plt.ylabel('Loss')
plt.legend()
plt.show()
```



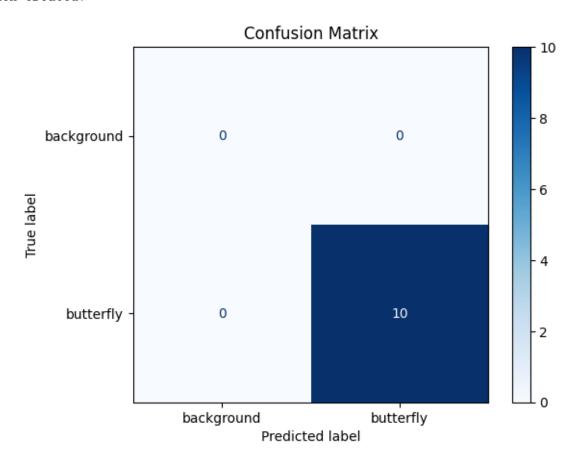
```
# Load the trained weights into the inference model
inference_model.load_weights(model.find_last(), by_name=True)
# Step 4.2: Collect true and predicted labels
true_labels = []
pred_labels = []
for image id in dataset test.image ids:
    # Load true labels (class IDs) from the dataset
    true_masks, true_classes = dataset_test.load_mask(image_id)
    # Predict the image using the inference model
    image = dataset_test.load_image(image_id)
    pred = inference_model.detect([image], verbose=0)[0]
    # Align true and predicted classes
    if len(true_classes) == len(pred['class_ids']):
        true_labels.extend(true_classes)
        pred_labels.extend(pred['class_ids'])
    else:
        # Handle mismatched cases
        true_labels.extend(true_classes)
        pred_labels.extend(pred['class_ids'])
        # Fill with '0' (background class) for unmatched entries
        if len(true_classes) > len(pred['class_ids']):
            pred_labels.extend([0] * (len(true_classes) -__
 →len(pred['class_ids'])))
        elif len(pred['class_ids']) > len(true_classes):
            true_labels.extend([0] * (len(pred['class_ids']) -__
 ⇔len(true_classes)))
# Step 4.3: Generate and plot the confusion matrix
cm = confusion_matrix(true_labels, pred_labels, labels=[0, 1]) # Add '0' for_
 \rightarrow background
disp = ConfusionMatrixDisplay(confusion_matrix=cm,__

display_labels=['background', 'butterfly'])

disp.plot(cmap=plt.cm.Blues)
plt.title("Confusion Matrix")
plt.show()
# Step 5: Visualize test predictions (Successes and Mistakes)
from mrcnn.visualize import display_instances
from mrcnn import visualize
```

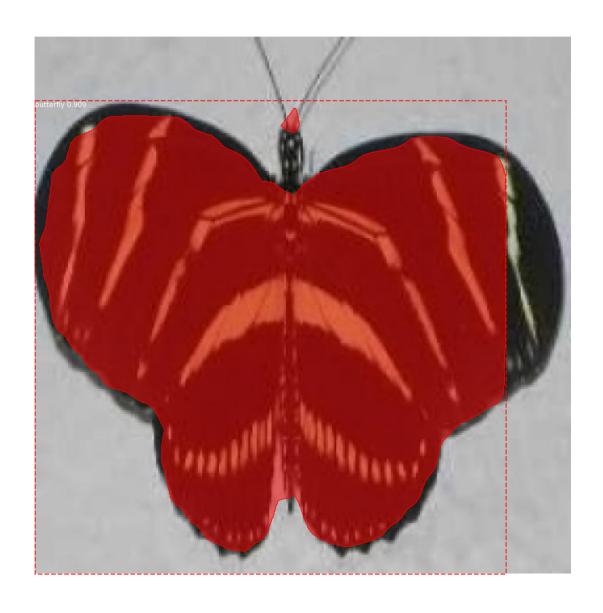
```
import random
# Select 5 random image IDs from the test dataset
for i in random.sample(list(dataset_test.image_ids), 5):
    image = dataset_test.load_image(i) # Load the image
    results = inference_model.detect([image], verbose=0) # Perform detection
    # Visualize the prediction
    visualize.display_instances(
         image,
        results[0]['rois'],
        results[0]['masks'],
        results[0]['class_ids'],
        dataset_test.class_names,
        results[0]['scores']
    )
Re-starting from epoch 10
loading annotations into memory...
Done (t=0.01s)
creating index...
index created!
/usr/local/lib/python3.10/dist-packages/keras/src/engine/training_v1.py:2359:
UserWarning: `Model.state_updates` will be removed in a future version. This
property should not be used in TensorFlow 2.0, as `updates` are applied
automatically.
  updates=self.state_updates,
loading annotations into memory...
Done (t=0.01s)
creating index...
index created!
loading annotations into memory...
Done (t=0.01s)
creating index...
index created!
loading annotations into memory...
Done (t=0.01s)
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loading annotations into memory...
Done (t=0.00s)
creating index...
```

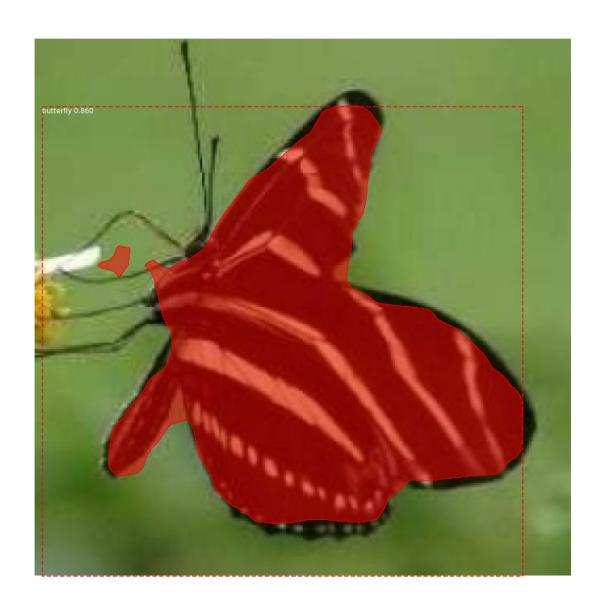
index created! loading annotations into memory... Done (t=0.00s)creating index... index created! loading annotations into memory... Done (t=0.00s)creating index... index created! loading annotations into memory... Done (t=0.01s)creating index... index created! loading annotations into memory... Done (t=0.02s)creating index... index created!













```
[52]: from mrcnn.utils import compute_ap
  from mrcnn import utils
  import numpy as np

# Store Average Precision (AP) for each image
APs = []

# Iterate over all test images
for image_id in dataset_test.image_ids:
    # Load the image
    image = dataset_test.load_image(image_id)

# Load ground truth data: masks and class IDs
```

```
gt_mask, gt_class_ids = dataset_test.load_mask(image_id)
  # Generate ground truth bounding boxes (compute from masks if not_
⇔pre-defined)
  gt_bbox = utils.extract_bboxes(gt_mask)
  # Run inference on the image
  results = inference_model.detect([image], verbose=0)
  r = results[0]
  # Skip images with no predictions
  if r['masks'].size == 0:
       continue
  # Ensure predicted masks are the same size as the ground truth masks
  pred_masks = r['masks']
  # If the prediction masks are larger than needed, resize them to match \Box
⇔ground truth
  if pred_masks.shape[0] != gt_mask.shape[0] or pred_masks.shape[1] !=__

gt_mask.shape[1]:
      pred_masks_resized = []
      for i in range(pred masks.shape[-1]):
          mask = pred_masks[:, :, i]
           mask resized = cv2.resize(mask.astype(np.uint8),
                                   (gt_mask.shape[1], gt_mask.shape[0]),
                                   interpolation=cv2.INTER NEAREST)
           pred_masks_resized.append(mask_resized)
      pred_masks = np.stack(pred_masks_resized, axis=-1)
  # Skip if there are no valid ground truth or predictions
  if gt_class_ids.size == 0 or r['class_ids'].size == 0:
       continue
  # Compute AP for the current image
  AP, precisions, recalls, overlaps = compute_ap(
                       # Ground truth bounding boxes
      gt_bbox,
      gt_class_ids,
                       # Ground truth class IDs
                       # Ground truth masks
      gt_mask,
      r['rois'], # Predicted bounding boxes
r['class_ids'], # Predicted class IDs
      r['scores'],
                      # Predicted scores (was missing in original)
                       # Predicted masks
      pred_masks
  )
  APs.append(AP)
```

```
# Compute and display the mean Average Precision (mAP)
if len(APs) > 0:
    mAP = np.mean(APs)
    print(f"Mean Average Precision (mAP): {mAP:.4f}")
else:
    print("No valid predictions found for evaluation")
```

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loading annotations into memory...
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creating index...
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```

```
[53]: from mrcnn.utils import compute_ap
      from mrcnn import utils
      import numpy as np
      from sklearn.metrics import precision_score, recall_score, f1_score
      import cv2
      # Store metrics for each image
      APs = []
      all_true_labels = []
      all_pred_labels = []
      # Iterate over all test images
      for image_id in dataset_test.image_ids:
          # Load the image
          image = dataset_test.load_image(image_id)
          # Load ground truth data: masks and class IDs
          gt_mask, gt_class_ids = dataset_test.load_mask(image_id)
          # Generate ground truth bounding boxes
          gt_bbox = utils.extract_bboxes(gt_mask)
          # Run inference on the image
          results = inference_model.detect([image], verbose=0)
          r = results[0]
          # Skip images with no predictions
          if r['masks'].size == 0:
              continue
          # Ensure predicted masks are the same size as the ground truth masks
          pred_masks = r['masks']
          # Resize prediction masks if needed
          if pred_masks.shape[0] != gt_mask.shape[0] or pred_masks.shape[1] !=_
       \neg gt_{mask.shape[1]}:
              pred_masks_resized = []
              for i in range(pred_masks.shape[-1]):
                  mask = pred_masks[:, :, i]
                  mask_resized = cv2.resize(mask.astype(np.uint8),
                                           (gt_mask.shape[1], gt_mask.shape[0]),
                                           interpolation=cv2.INTER_NEAREST)
                  pred_masks_resized.append(mask_resized)
              pred_masks = np.stack(pred_masks_resized, axis=-1)
```

```
# Skip if there are no valid ground truth or predictions
    if gt_class_ids.size == 0 or r['class_ids'].size == 0:
        continue
    # Compute AP for the current image
   AP, precisions, recalls, overlaps = compute_ap(
                        # Ground truth bounding boxes
       gt bbox,
       gt_class_ids,
                        # Ground truth class IDs
       gt_mask,
                        # Ground truth masks
       r['rois'],
                   # Predicted bounding boxes
       r['class_ids'], # Predicted class IDs
       r['scores'], # Predicted scores
                        # Predicted masks
       pred masks
   )
   APs.append(AP)
    # Prepare labels for sklearn metrics
    # Convert masks to binary labels for each pixel
   gt_mask_binary = np.any(gt_mask > 0, axis=2).astype(np.int32)
   pred_mask_binary = np.any(pred_masks > 0, axis=2).astype(np.int32)
   # Flatten masks for sklearn metrics
   gt mask flat = gt mask binary.flatten()
   pred_mask_flat = pred_mask_binary.flatten()
    # Store flattened labels
   all_true_labels.extend(gt_mask_flat)
   all_pred_labels.extend(pred_mask_flat)
# Convert lists to numpy arrays for sklearn metrics
all_true_labels = np.array(all_true_labels)
all_pred_labels = np.array(all_pred_labels)
# Calculate overall metrics
if len(APs) > 0:
   # Calculate mAP
   mAP = np.mean(APs)
   print(f"Mean Average Precision (mAP): {mAP:.4f}")
    # Calculate sklearn metrics
   precision = precision_score(all_true_labels, all_pred_labels,__
 ⇔average='binary')
   recall = recall_score(all_true_labels, all_pred_labels, average='binary')
   f1 = f1_score(all_true_labels, all_pred_labels, average='binary')
   # Print all metrics
```

```
print("\nOverall Metrics:")
    print(f"Precision: {precision:.4f}")
    print(f"Recall: {recall:.4f}")
    print(f"F1 Score: {f1:.4f}")
    # Calculate per-image averages
    print("\nPer-image AP Statistics:")
    print(f"Min AP: {np.min(APs):.4f}")
    print(f"Max AP: {np.max(APs):.4f}")
    print(f"Median AP: {np.median(APs):.4f}")
    print(f"Standard Deviation AP: {np.std(APs):.4f}")
    # Print detailed distribution of APs
    percentiles = [25, 50, 75, 90, 95]
    print("\nAP Percentiles:")
    for p in percentiles:
        print(f"{p}th percentile: {np.percentile(APs, p):.4f}")
else:
    print("No valid predictions found for evaluation")
# Save metrics to a file
import json
from datetime import datetime
metrics = {
    "timestamp": datetime.now().strftime("%Y-%m-%d %H:%M:%S"),
    "mAP": float(mAP),
    "precision": float(precision),
    "recall": float(recall),
    "f1_score": float(f1),
    "num_images_evaluated": len(APs),
    "ap_statistics": {
        "min": float(np.min(APs)),
        "max": float(np.max(APs)),
        "median": float(np.median(APs)),
        "std": float(np.std(APs)),
        "percentiles": {
            str(p): float(np.percentile(APs, p)) for p in percentiles
    }
}
# Save metrics to JSON file
with open('evaluation_metrics.json', 'w') as f:
    json.dump(metrics, f, indent=4)
print("\nMetrics saved to 'evaluation_metrics.json'")
```

loading annotations into memory... Done (t=0.00s)creating index... index created! loading annotations into memory... Done (t=0.00s)creating index... index created! loading annotations into memory... Done (t=0.00s)creating index... index created! loading annotations into memory... Done (t=0.01s)creating index... index created! loading annotations into memory... Done (t=0.00s)creating index... index created! loading annotations into memory... Done (t=0.00s)creating index... index created! loading annotations into memory... Done (t=0.01s)creating index... index created! loading annotations into memory... Done (t=0.00s)creating index... index created! loading annotations into memory... Done (t=0.00s)creating index... index created! loading annotations into memory... Done (t=0.00s)creating index... index created! Mean Average Precision (mAP): 1.0000

Overall Metrics: Precision: 0.9641 Recall: 0.8975 F1 Score: 0.9296

Per-image AP Statistics:

Min AP: 1.0000 Max AP: 1.0000 Median AP: 1.0000

Standard Deviation AP: 0.0000

AP Percentiles:

25th percentile: 1.0000 50th percentile: 1.0000 75th percentile: 1.0000 90th percentile: 1.0000 95th percentile: 1.0000

Metrics saved to 'evaluation_metrics.json'