# Reproducibility Notice

To ensure full reproducibility of this research, please follow the environment setup instructions below:

1. This notebook was developed using **Python 3.10.8** in a Conda environment.
2. All required packages are listed in the requirements.txt file provided alongside this notebook.

# Content of “requirements.txt”

contourpy==1.3.1

cycler==0.12.1

fonttools==4.56.0

h5py==3.13.0

idna==3.10

joblib==1.4.2

keras==2.10.0

Keras-Preprocessing==1.1.2

kiwisolver==1.4.8

libclang==18.1.1

markdown-it-py==3.0.0

matplotlib==3.10.1

mdurl==0.1.2

ml\_dtypes==0.5.1

namex==0.0.8

numpy==1.23.5

optree==0.14.1

pandas==2.2.3

pillow==11.1.0

protobuf==3.19.6

pyparsing==3.2.1

PyQt5==5.15.4

python-dateutil==2.9.0.post0

pytz==2025.1

pywin32==308

rich==13.9.4

scikit-learn==1.6.1

scipy==1.15.2

six==1.17.0

tensorflow-estimator==2.10.0

tensorflow-gpu==2.10.0

tensorflow-io-gcs-filesystem==0.31.0

threadpoolctl==3.6.0

tzdata==2025.1

webencodings==0.5.1