

# DATA SET SOURCES

In this appendix we provide detailed lists of the different data sets used in the paper entitled ‘‘Computationally Efficient Spatio-Temporal Dynamic Texture Recognition for Volatile Organic Compound (VOC) Leakage Detection in Industrial Plants’’. Many of source videos contain multiple scenes. Our own video clips are available on Google Drive via the following link [https://drive.google.com/open?id=1Sm0FwgUgP\\_j1TNBIxzUi8Pr7TvIdiuh0](https://drive.google.com/open?id=1Sm0FwgUgP_j1TNBIxzUi8Pr7TvIdiuh0).

Scene ID	Hyperlink	Contains leak?
Scene 1	<a href="https://www.youtube.com/watch?v=G7boBAAoQPA">https://www.youtube.com/watch?v=G7boBAAoQPA</a>	No
Scene 2	<a href="https://www.youtube.com/watch?v=Xpsz0B67NAI">https://www.youtube.com/watch?v=Xpsz0B67NAI</a>	No
Scene 3	<a href="https://www.youtube.com/watch?v=YU-8pg_fFWQI">https://www.youtube.com/watch?v=YU-8pg_fFWQI</a>	No
Scene 4	<a href="http://www.cantronics.com/images/stories/download/video/TR4700-Video-Bridge-Far-2010.avi">http://www.cantronics.com/images/stories/download/video/TR4700-Video-Bridge-Far-2010.avi</a>	No
Scene 5	<a href="http://www.cantronics.com/images/stories/download/video/TR4700-Video-Bridge-Near-2010.avi">http://www.cantronics.com/images/stories/download/video/TR4700-Video-Bridge-Near-2010.avi</a>	No
Scene 6	<a href="http://www.cantronics.com/images/stories/download/video/TR4700-Video-Road-Near-2010.avi">http://www.cantronics.com/images/stories/download/video/TR4700-Video-Road-Near-2010.avi</a>	No
Scene 7	<a href="https://www.youtube.com/watch?v=yqz4-Neo0IY">https://www.youtube.com/watch?v=yqz4-Neo0IY</a>	Yes
Scene 8	<a href="https://www.youtube.com/watch?v=Zumb-sTzgHY">https://www.youtube.com/watch?v=Zumb-sTzgHY</a>	Yes
Scene 9	<a href="https://www.youtube.com/watch?v=GHXon3g2cAM">https://www.youtube.com/watch?v=GHXon3g2cAM</a>	Yes
Scene 10	<a href="https://www.youtube.com/watch?v=FqD41AODUyY">https://www.youtube.com/watch?v=FqD41AODUyY</a>	Yes
Scene 11	<a href="https://www.youtube.com/watch?v=LPCte7Bn7Qw">https://www.youtube.com/watch?v=LPCte7Bn7Qw</a>	Yes
Scene 12	<a href="https://www.youtube.com/watch?v=D5FjEAYsvv8">https://www.youtube.com/watch?v=D5FjEAYsvv8</a>	Yes
Scene 13	<a href="https://www.youtube.com/watch?v=S3Mzay6j1q4">https://www.youtube.com/watch?v=S3Mzay6j1q4</a>	Yes

TABLE I: Hyperlinks of the videos from which we obtained temporal 1-D signals. Here, we used only one scene per video to extract temporal 1-D signals.

Video ID	Hyperlink	Contains leak?
Scene 1-4	<a href="https://www.youtube.com/watch?v=G7boBAAoQPA">https://www.youtube.com/watch?v=G7boBAAoQPA</a>	No
Scene 5-7	<a href="https://www.youtube.com/watch?v=Xpsz0B67NAI">https://www.youtube.com/watch?v=Xpsz0B67NAI</a>	No
Scene 8-9	<a href="https://www.youtube.com/watch?v=YU-8pg_fFWQ">https://www.youtube.com/watch?v=YU-8pg_fFWQ</a>	Yes
Scene 10-11	<a href="https://www.youtube.com/watch?v=GHXon3g2cAM">https://www.youtube.com/watch?v=GHXon3g2cAM</a>	Yes
Scene 12	<a href="https://www.youtube.com/watch?v=FqD41AODUyY">https://www.youtube.com/watch?v=FqD41AODUyY</a>	Yes
Scene 13-15	<a href="https://www.youtube.com/watch?v=Sqg43EeBkY8">https://www.youtube.com/watch?v=Sqg43EeBkY8</a>	Yes
Scene 16-20	<a href="https://www.youtube.com/watch?v=YZlnV3o4TRk">https://www.youtube.com/watch?v=YZlnV3o4TRk</a>	Yes
Scene 21-24	<a href="https://www.youtube.com/watch?v=lcTPioWkeCc&amp;t=149s">https://www.youtube.com/watch?v=lcTPioWkeCc&amp;t=149s</a>	No
Scene 25	<a href="https://www.youtube.com/watch?v=4RVhik7eIzk">https://www.youtube.com/watch?v=4RVhik7eIzk</a>	No
Scene 26	<a href="https://www.youtube.com/watch?v=5k8GORDmpog">https://www.youtube.com/watch?v=5k8GORDmpog</a>	No
Scene 27	<a href="https://www.youtube.com/watch?v=623iAfO8D_Q">https://www.youtube.com/watch?v=623iAfO8D_Q</a>	No
Scene 28	<a href="https://www.youtube.com/watch?v=p4Q2jBVxrPw">https://www.youtube.com/watch?v=p4Q2jBVxrPw</a>	Yes
Scene 29	<a href="https://www.youtube.com/watch?v=UeN18sEPSK0">https://www.youtube.com/watch?v=UeN18sEPSK0</a>	Yes
Scene 30	<a href="https://www.youtube.com/watch?v=QQ9iPz7HCig">https://www.youtube.com/watch?v=QQ9iPz7HCig</a>	Yes
Scene 31	<a href="https://www.youtube.com/watch?v=B_IOx0Cc7Z4">https://www.youtube.com/watch?v=B_IOx0Cc7Z4</a>	Yes
Scene 32	<a href="https://www.youtube.com/watch?v=9PDJAEWg3Ok">https://www.youtube.com/watch?v=9PDJAEWg3Ok</a>	Yes

TABLE II: Hyperlinks of the videos from which we extracted two datasets: Scene 1-20 are the data set used to establish the confidence score as in Table III. Scene 1-20 are also used as validation dataset for the spatio-temporal CNN as in Table V. Scene 21-32 are the test data set used in the joint evaluation of both 1-D and 2-D CNNs as in Table VI

Video ID	Hyperlink	Number of Scenes	Contains leak?
Video 1	<a href="https://www.youtube.com/watch?v=G7boBAAoQPA">https://www.youtube.com/watch?v=G7boBAAoQPA</a>	15	No
Video 2	<a href="https://www.youtube.com/watch?v=Xpsz0B67NAI">https://www.youtube.com/watch?v=Xpsz0B67NAI</a>	5	No
Video 3	<a href="https://www.youtube.com/watch?v=YU-8pg_fFWQ">https://www.youtube.com/watch?v=YU-8pg_fFWQ</a>	1	No
Video 4	<a href="https://www.youtube.com/watch?v=xsMMvLL0B_k">https://www.youtube.com/watch?v=xsMMvLL0B_k</a>	3	No
Video 5	<a href="https://www.youtube.com/watch?v=xsMMvLL0B_k">https://www.youtube.com/watch?v=xsMMvLL0B_k</a>	3	No
Video 6	<a href="https://www.youtube.com/watch?v=Sqg43EeBkY8">https://www.youtube.com/watch?v=Sqg43EeBkY8</a>	3	No
Video 7	<a href="http://www.cantronics.com/images/stories/download/video">http://www.cantronics.com/images/stories/download/video</a>	1	No
Video 8	<a href="http://www.cantronics.com/images/stories/download/video">http://www.cantronics.com/images/stories/download/video</a>	1	No
Video 9	<a href="http://www.cantronics.com/images/stories/download/video">http://www.cantronics.com/images/stories/download/video</a>	1	No
Video 10	<a href="https://www.youtube.com/watch?v=yqz4-Neo0IY">https://www.youtube.com/watch?v=yqz4-Neo0IY</a>	1	Yes
Video 11	<a href="https://www.youtube.com/watch?v=Zumb-sTzgHY">https://www.youtube.com/watch?v=Zumb-sTzgHY</a>	1	Yes
Video 12	<a href="https://www.youtube.com/watch?v=GHXon3g2cAM">https://www.youtube.com/watch?v=GHXon3g2cAM</a>	3	Yes
Video 13	<a href="https://www.youtube.com/watch?v=FqD41AODUyY">https://www.youtube.com/watch?v=FqD41AODUyY</a>	1	Yes
Video 14	<a href="https://www.youtube.com/watch?v=YZlnV3o4TRk">https://www.youtube.com/watch?v=YZlnV3o4TRk</a>	1	Yes
Video 15	<a href="https://www.youtube.com/watch?v=D5FjEAYsvv8">https://www.youtube.com/watch?v=D5FjEAYsvv8</a>	4	Yes
Video 16	<a href="https://www.youtube.com/watch?v=S3Mzay6jlq4">https://www.youtube.com/watch?v=S3Mzay6jlq4</a>	2	Yes
Video 17	<a href="https://www.youtube.com/watch?v=Z_4wa3UW-2o">https://www.youtube.com/watch?v=Z_4wa3UW-2o</a>	2	Yes

TABLE III: Video links for the spatio-temporal training data set. There are a total of 33 scenes which contain no VOC-leak and 15 scenes which contain VOC leak. The scenes vary in length.