



PRESENTATION OF THE MODEL





Deep Learning results



Fluid mechanics results

ado et (2021)	Metrics	FAC2	NMSE	FB	R	MAE_{rel}	J_{3D}	SSIM
	Score	0.818	1.565	0.176	0.851	0.431	0.620	0.768
Jur al.	Expected values	> 0.5	< 1.5	< 0.3	1	0	1	1

Published in scientific article (DOI:10.1016/j.eswa.2022.117294) and presented at international conference (https://arxiv.org/abs/2112.05657)

Speed up of an order of magnitude of 100/1000 compared to traditional Fluid mechanics models

BACKGROUND IMPACT





Background from the RIO models represent 70% of the value of the aq station





Measure the impact on the mean value and on the 90th percentile compared to the background data YEARLY AQ STATIONS





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YEARLY AQ STATIONS



Issue : To compute the average annual concentration of an area it is necessary to make the summation of the different wind directions weighted by their frequencies.



How many directions needs to be computed ? Each direction is a supplementary cost





For 5 building layouts 18 wind directions were computed and the annual average determined for 5 different type of wind roses





