

Xarxes Neuronals i Aprenentatge Profund
MatCAD 2022-2023, UAB

MUSIC GENRE CLASSIFICATION

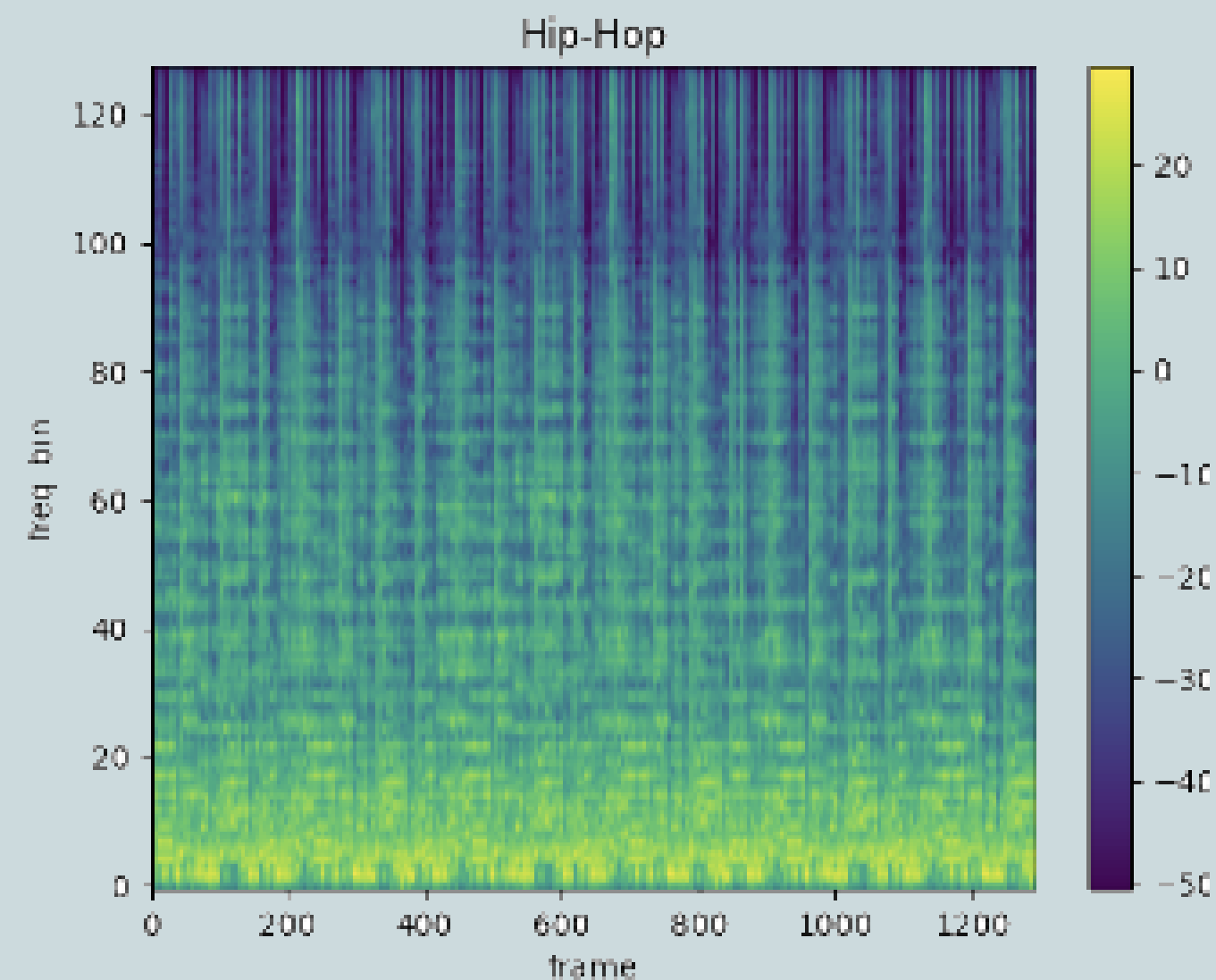
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OBJECTIVE



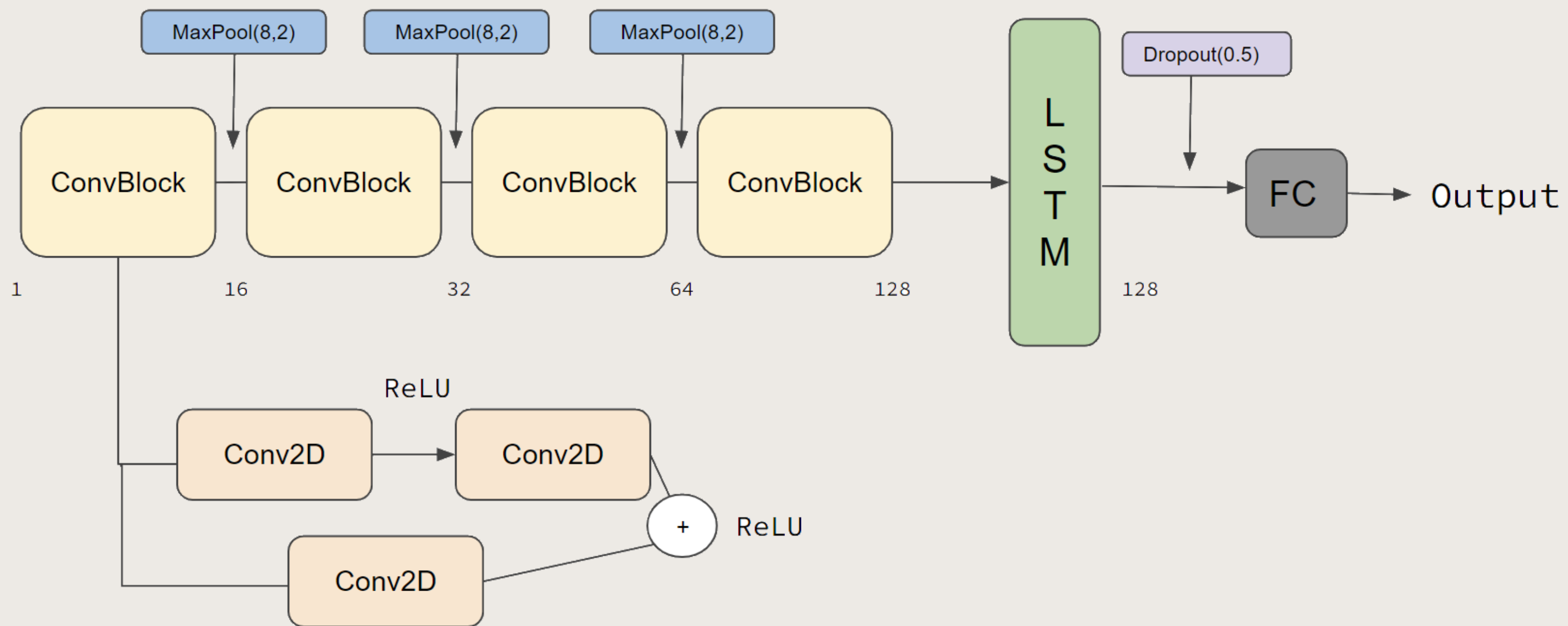
DATA & STARTING POINT



Model	Accuracy
Fully connected	~11%
CNN	17.6%



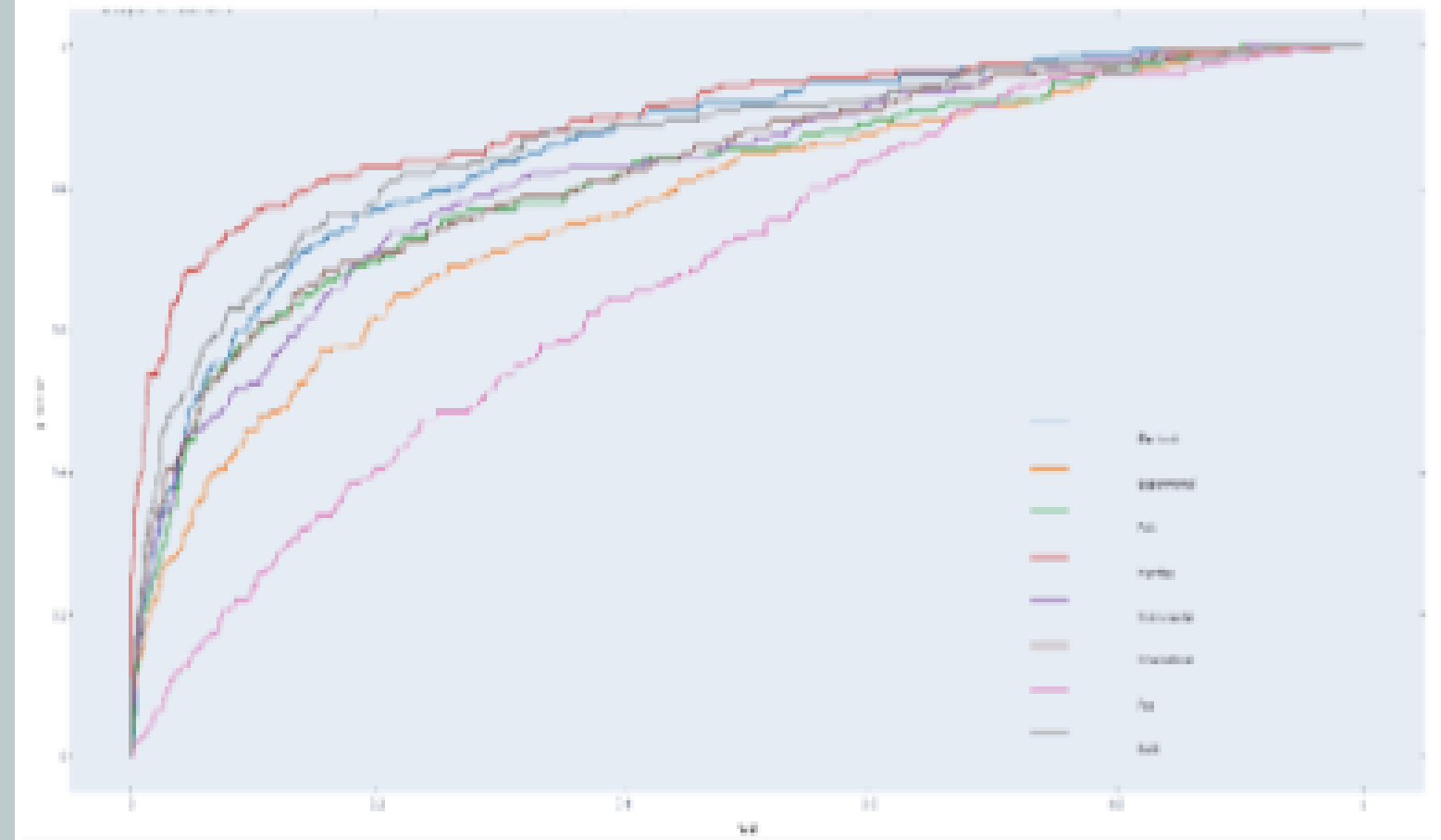
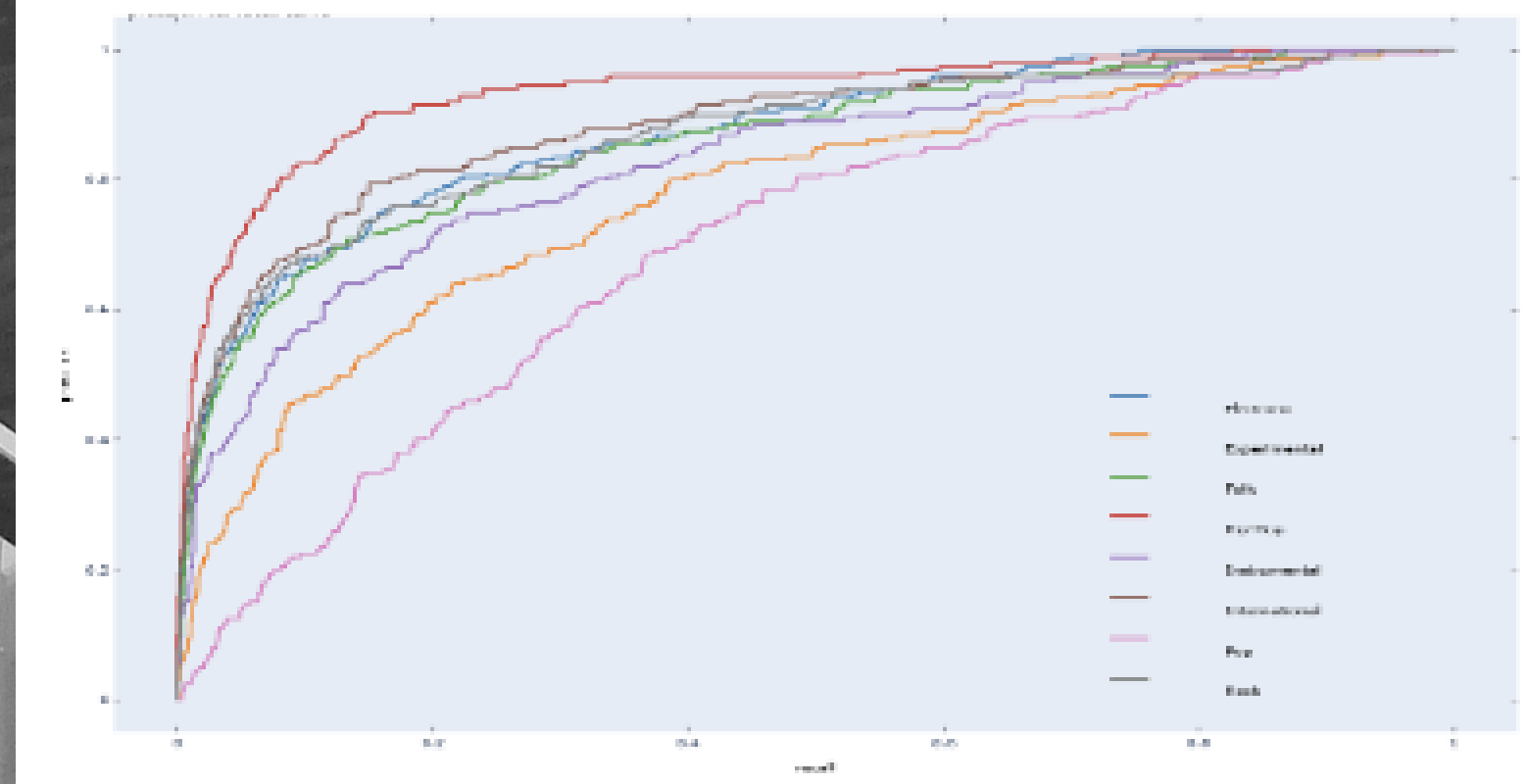
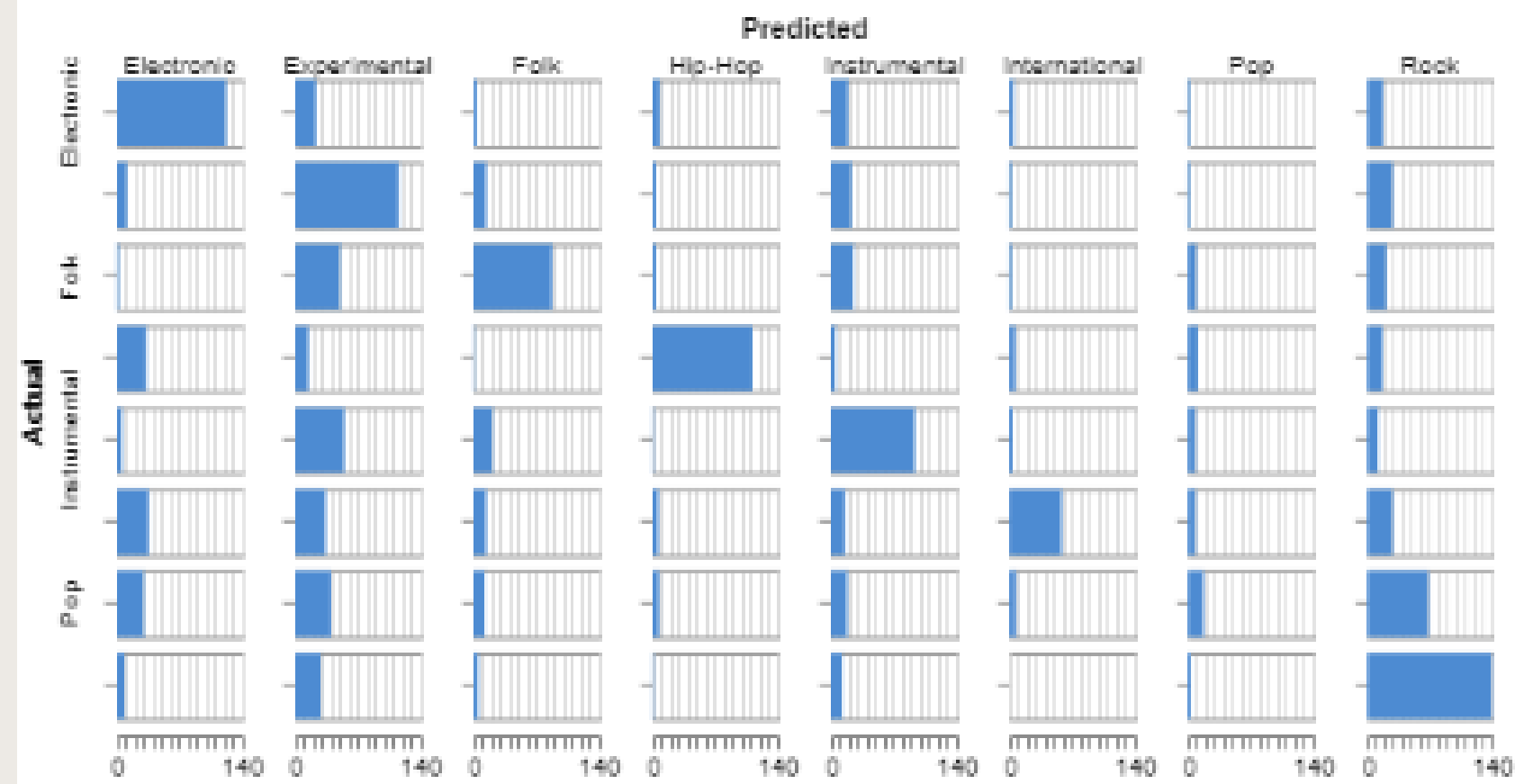
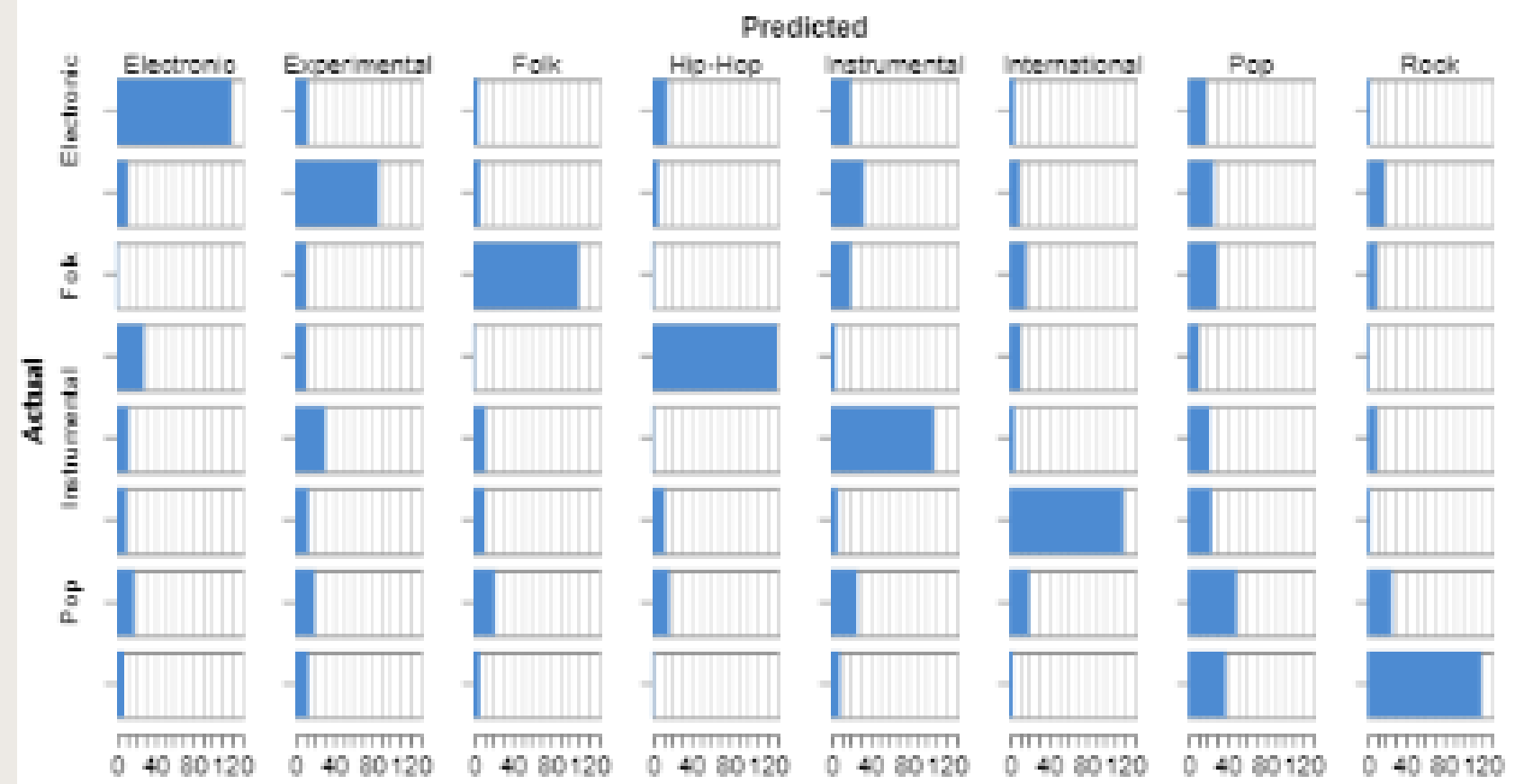
ARCHITECTURES USED



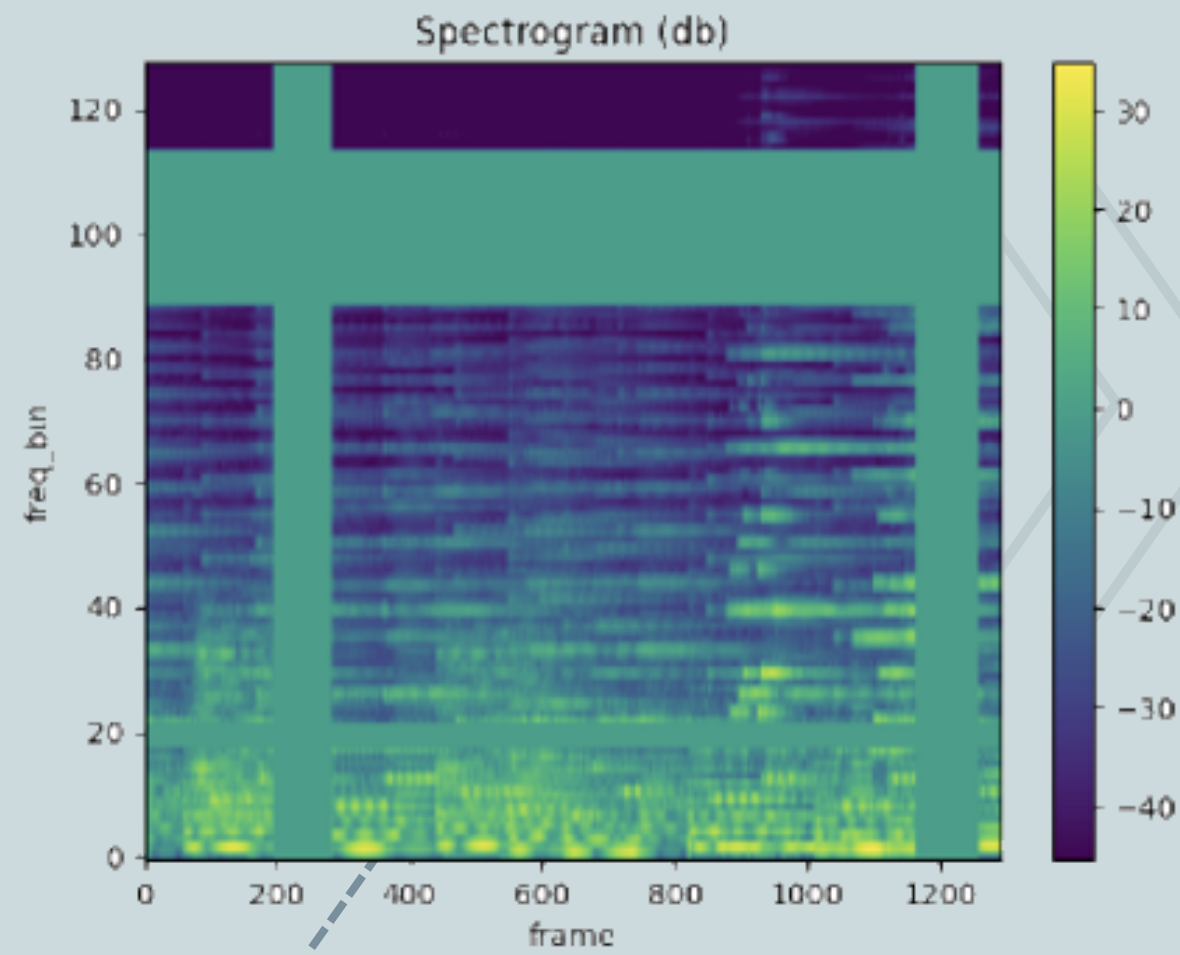
TRAINING SETUP

Model	Initial LR	Data Augmentation	Weight Decay	Epochs	Time (s)	N° Parameters	Train Loss	Test Loss	Accuracy
CNN1D	0.001	No	No	30	900	236,680	1.50	1.85	33%
CNN1D	0.0001	Yes	Yes	50	1200	236,680	1.3	1.55	47%
CNN2D	0.001	No	No	30	5180	37,912,576	0.1	1.5	49%
CRNN	0.001	No	No	30	6220	438,808	0.1	1.1	56%
CRNN	0.01	No	No	30	6220	438,808	2.08	2.08	12%
CRNN	0.0001	No	Yes	20	3000	438,808	0.9	1.3	47%

RESULTS & ANALYSIS



FUTURE WORK



CONCLUSIONS



- **Complexitat de les dades**
- **Starting Point**
- **Temps**