

LIP READING FOR SILENT SPEECH RECOGNITION USING 3D CONVOLUTION

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MACHACA

TUTOR:
COEN JACOBUS ANTENS

ÍNDEX

PER QUÈ?

PROBLEMA

OBJECTIUS

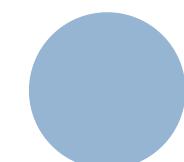
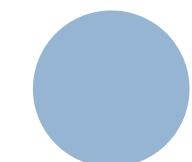
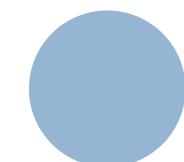
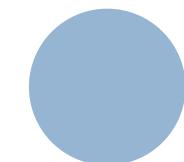
METODOLOGIA

DESENVOLUPAMENT

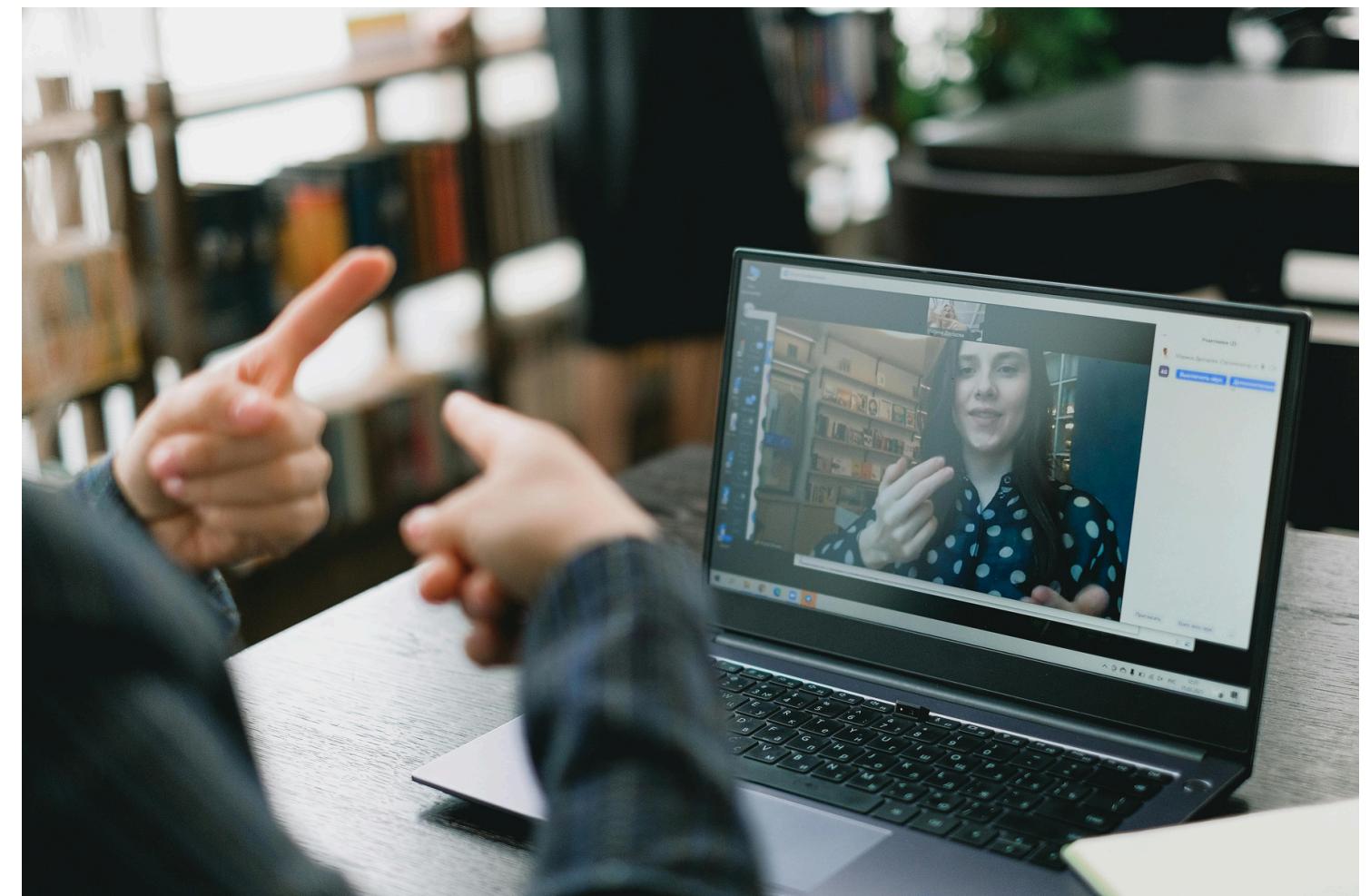
RESULTATS

MILLORES A FUTUR

CONCLUSIÓ



PER QUÈ 'LIP READING'?



PROBLEMA



PÈRDUA D'AUDICIÓ



NO S'ENTÉN L'IDIOMA
DE SIGNES



ESTÀ MOLT
LLUNY

OBJECTIUS

PRINCIPALS

CLASSIFICAR VOCALS



A

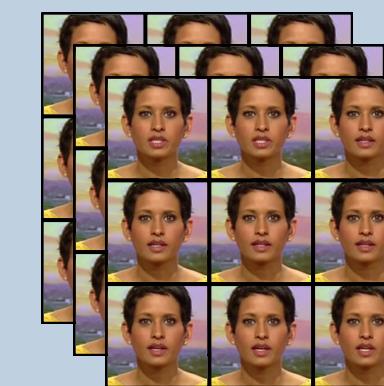
CLASSIFICAR PARAULES



ATTACK

A FUTUR

PREDIR FRASES



ATTACK THE BASE

METODOLOGIA

KANBAN



EINA

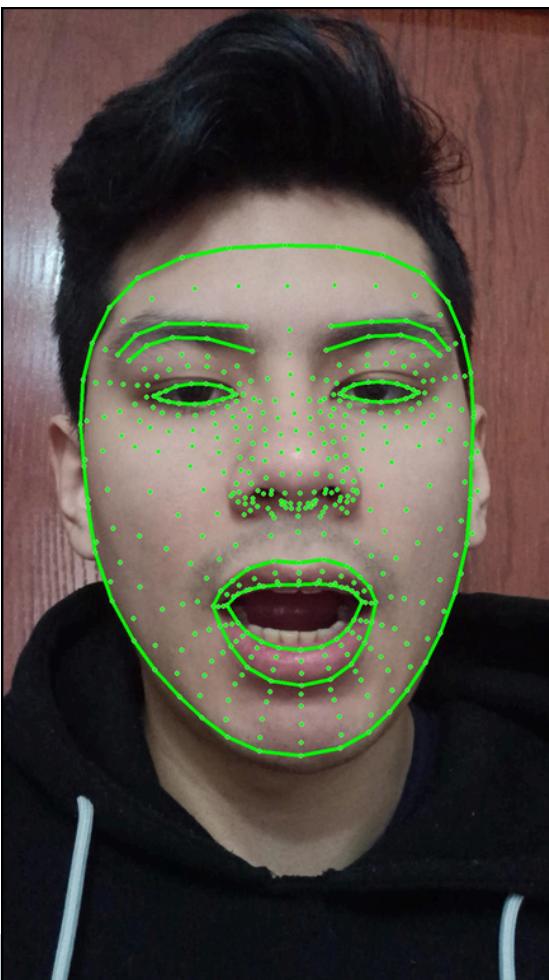
Jira Software

CRONOGRAMA



DESENVOLUPAMENT

VOWEL
RECOGNITION



80
DISTÂNCIES

DESENVOLUPAMENT

VOWEL
RECOGNITION

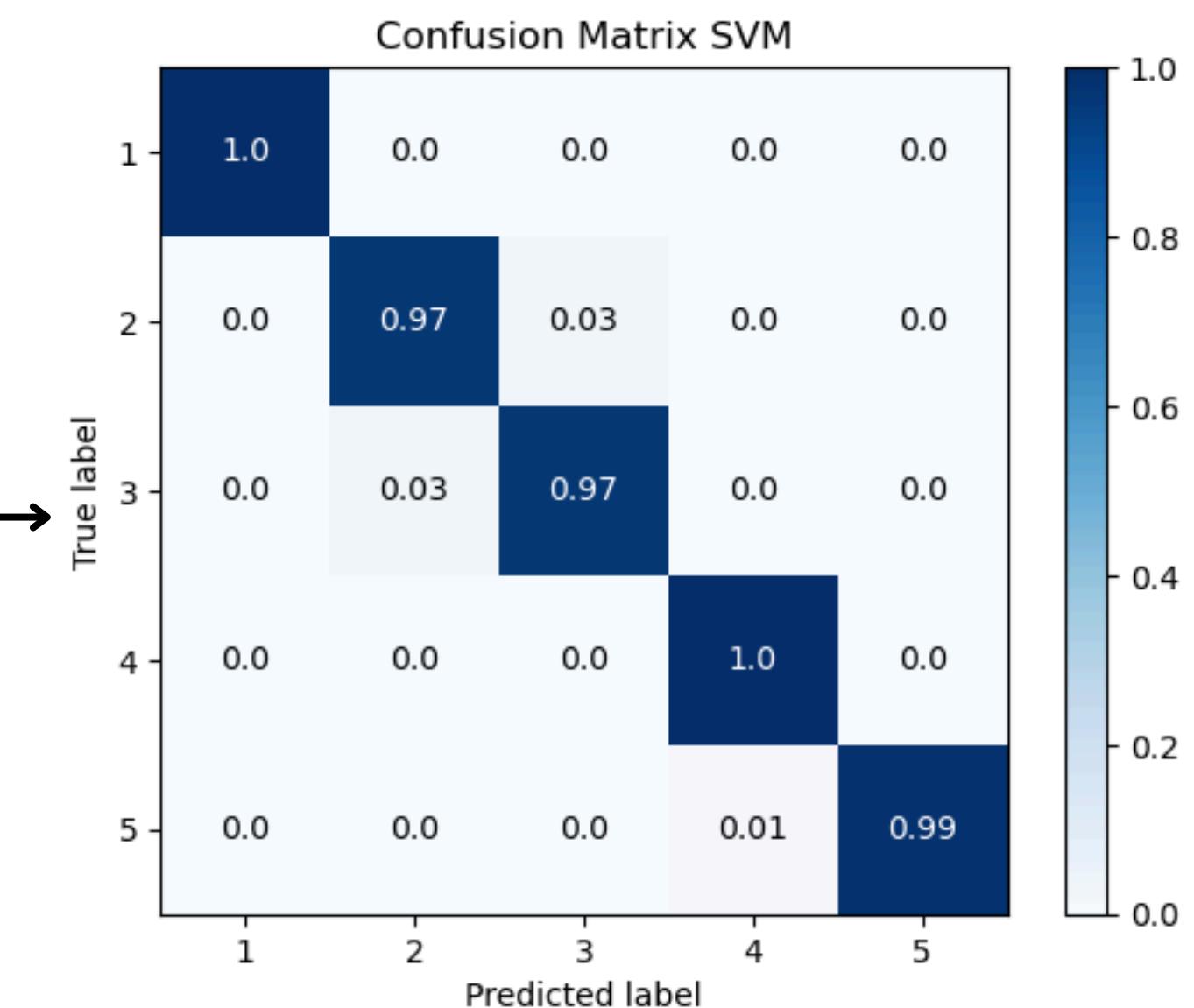


RESULTATS

VOWEL RECOGNITION

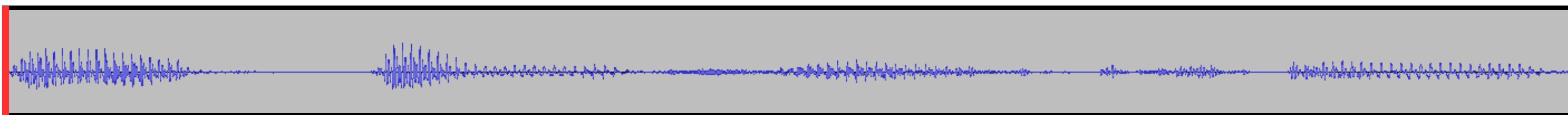
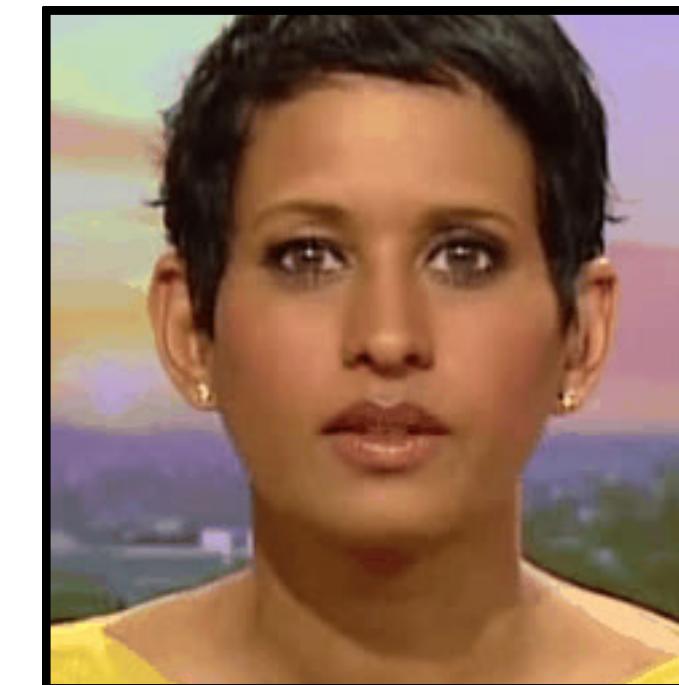
MODEL ENTRENAT AMB SVM
PRECISIÓ DE PREDICCIÓ: **98%**

CROSSVALIDATION SCORE: **76,2%**



DESENVOLUPAMENT

WORD
RECOGNITION



DESENVOLUPAMENTO

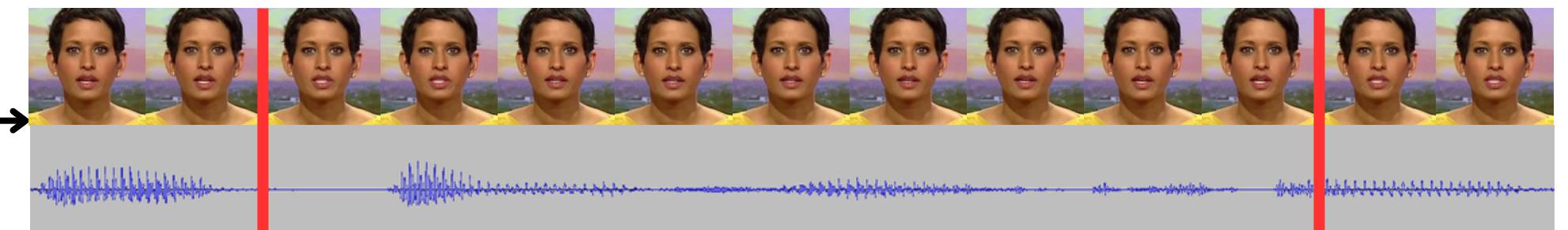
WORD RECOGNITION



VÍDEO



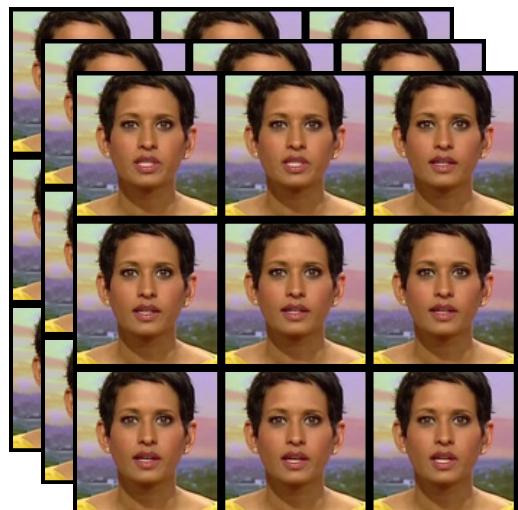
FRAMES



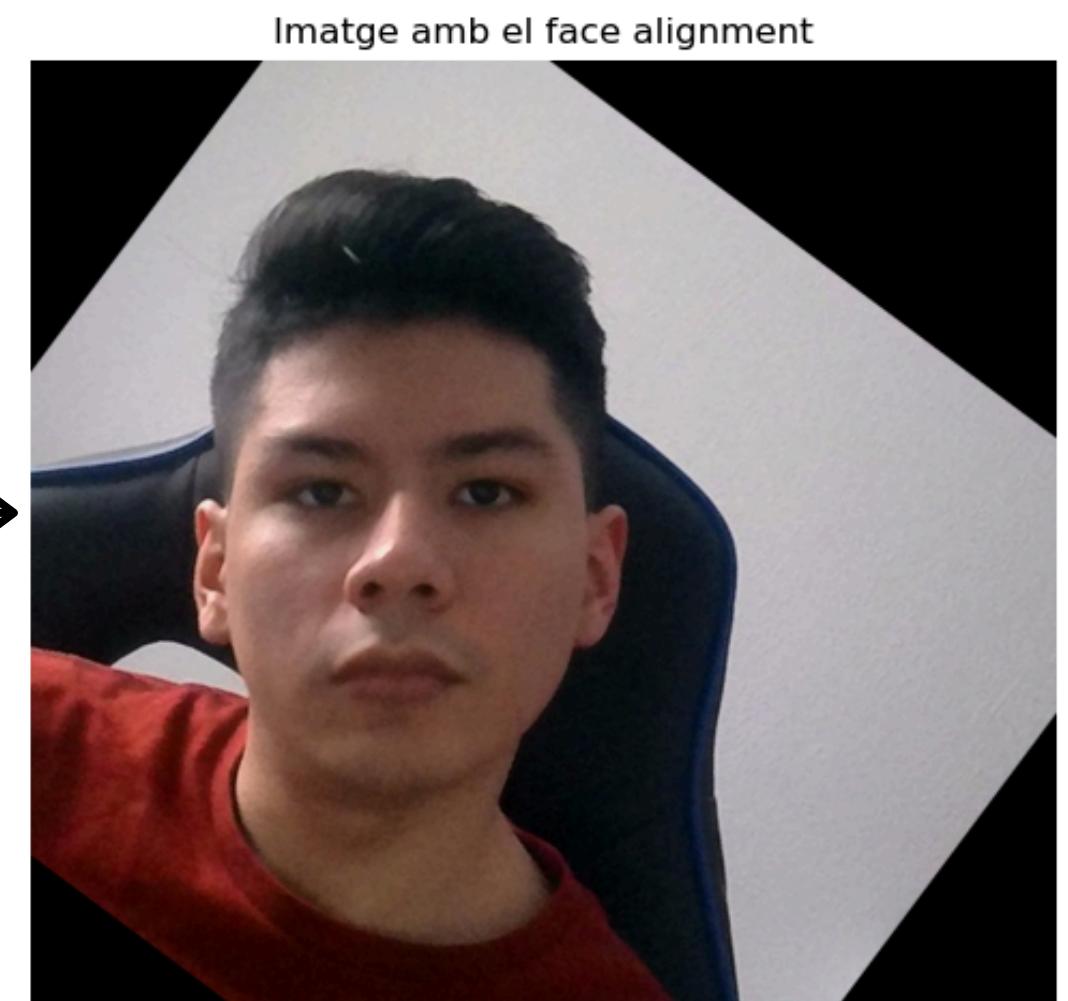
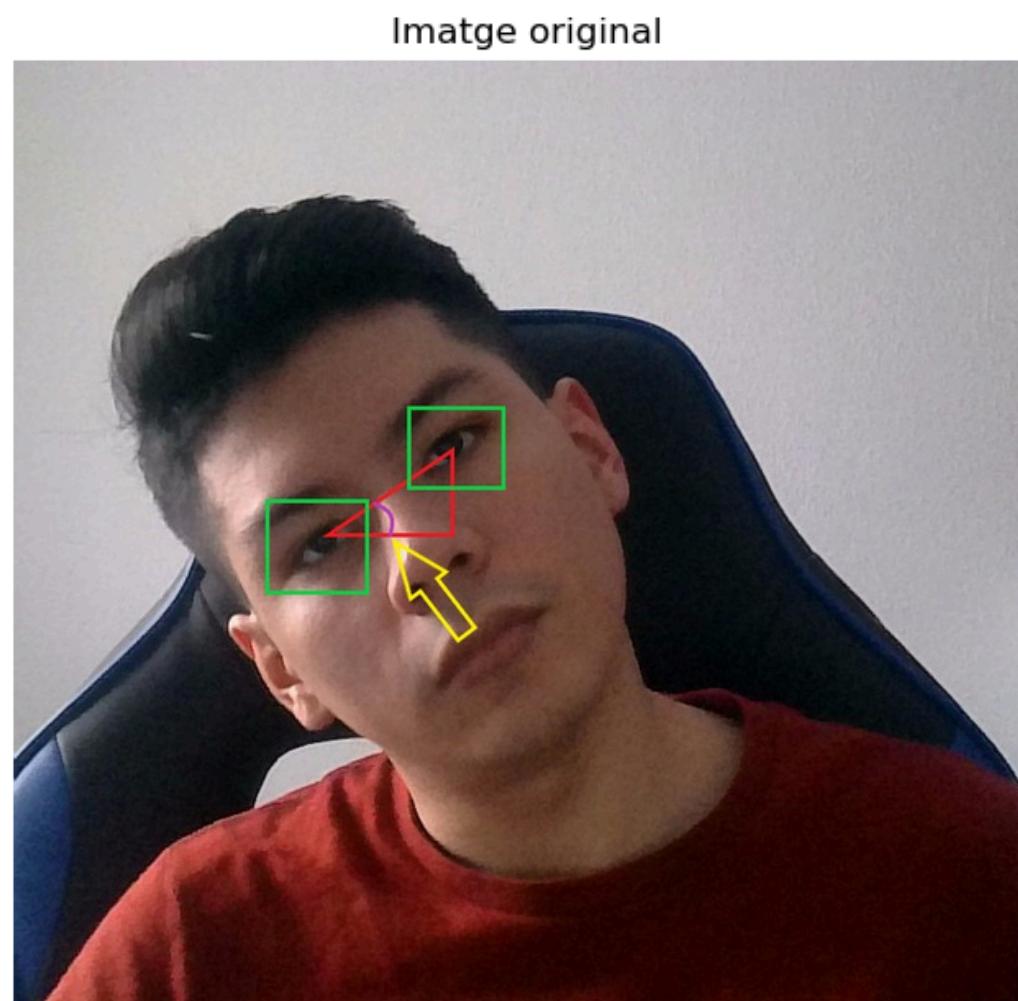
"ATTACK"

DESENVOLUPAMENT

WORD RECOGNITION



**FRAMES
REDUÏTS**



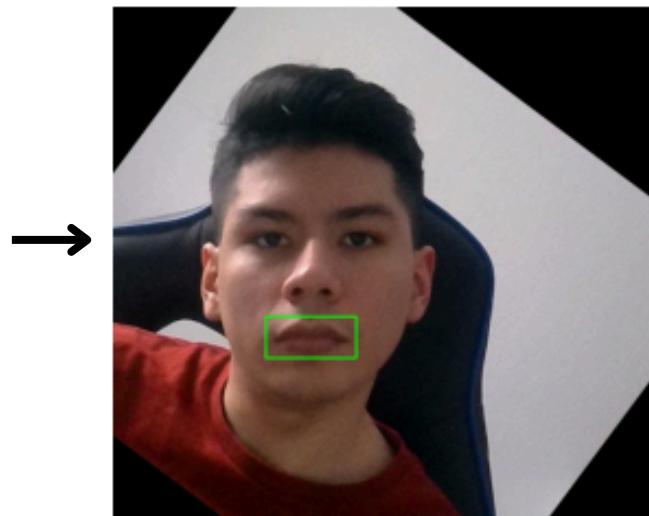
DESENVOLUPAMENT

WORD RECOGNITION

imatge amb el face alignment



Requadre Calculat



Requadre Original



Requadre Redimensionat

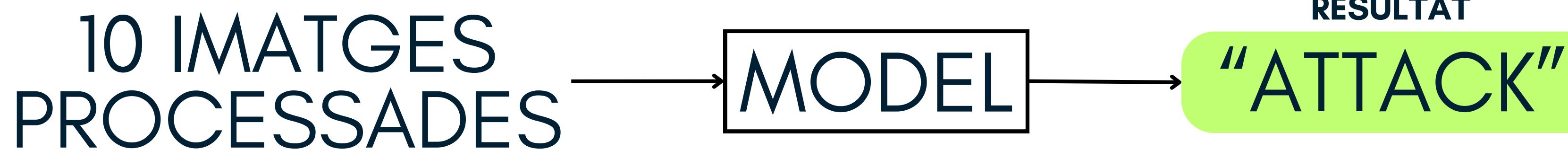


Requadre Normalitzat



DESENVOLUPAMENT

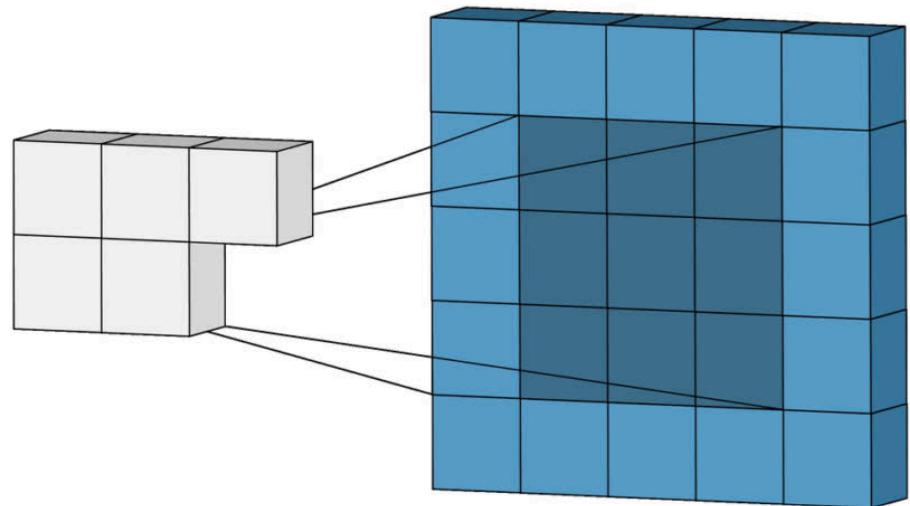
VOWEL
RECOGNITION



DESENVOLUPAMENT

VOWEL RECOGNITION

CONVOLUCIÓ 2D



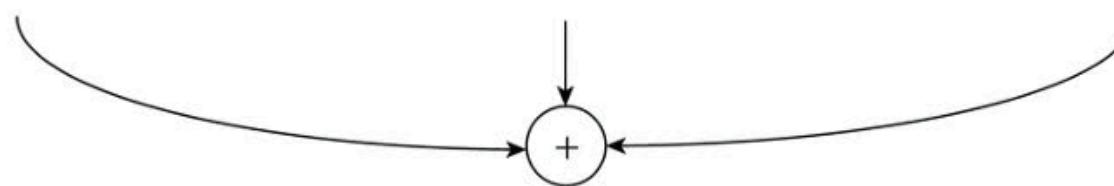
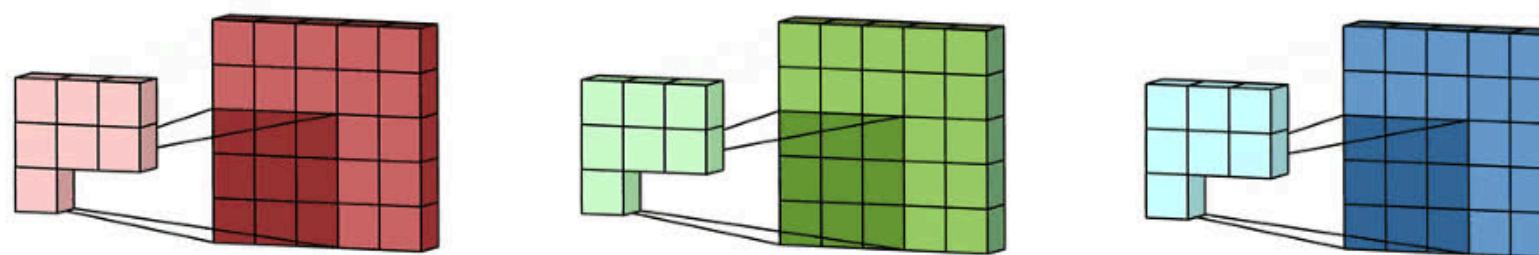
EXTRACCIÓ DE CARACTERÍSTIQUES

VORES
TEXTURES
PATRONS

DESENVOLUPAMENT

VOWEL RECOGNITION

CONVOLUCIO 3D



EXTRACCIÓ DE
CARACTERÍSTIQUES

ESPACIALS

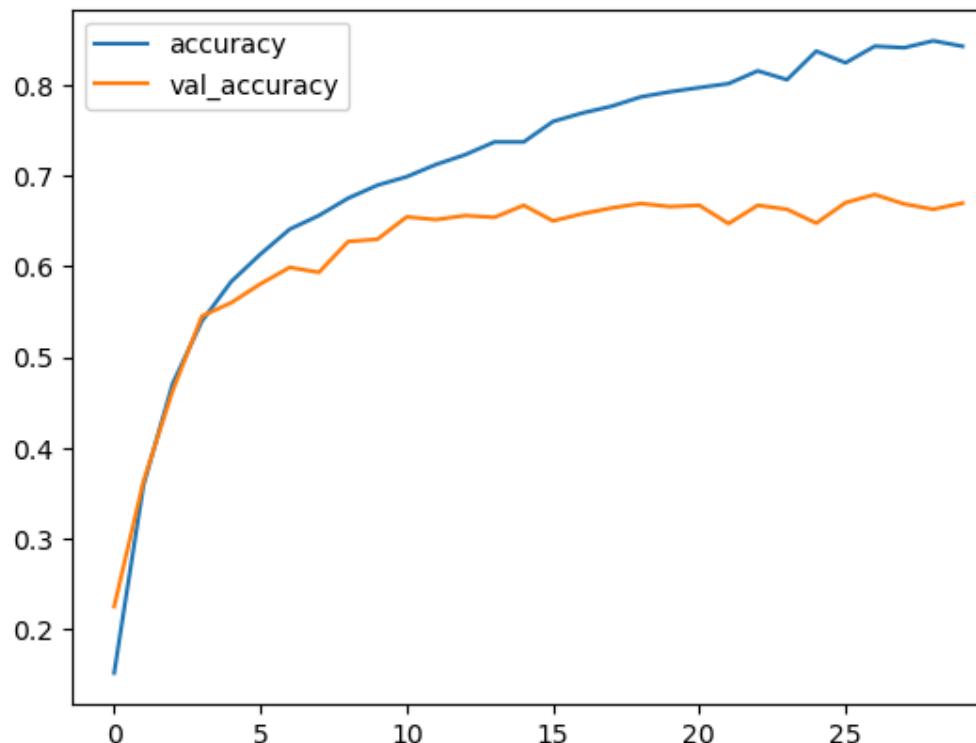
TEMPORALS

RESULTATS

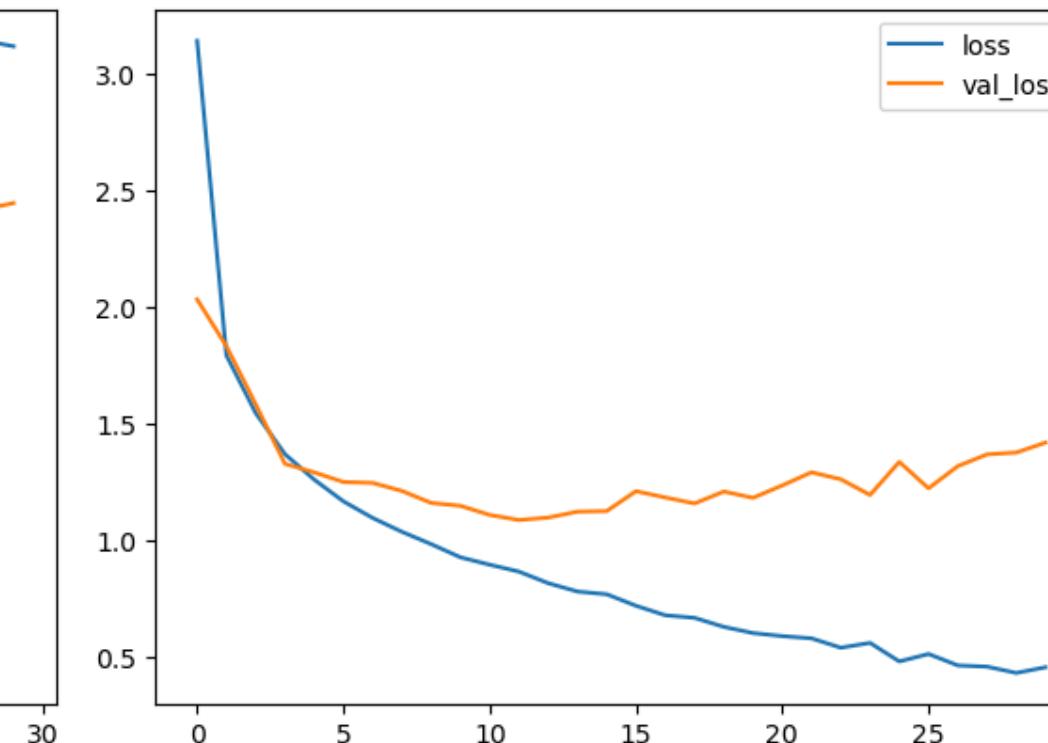
WORD RECOGNITION

WORDS = [ATTACK, BLACK, FINAL, IMPACT,
LATER, MEDIA, OFFICE, PRESS, SPEND, WEEKS]

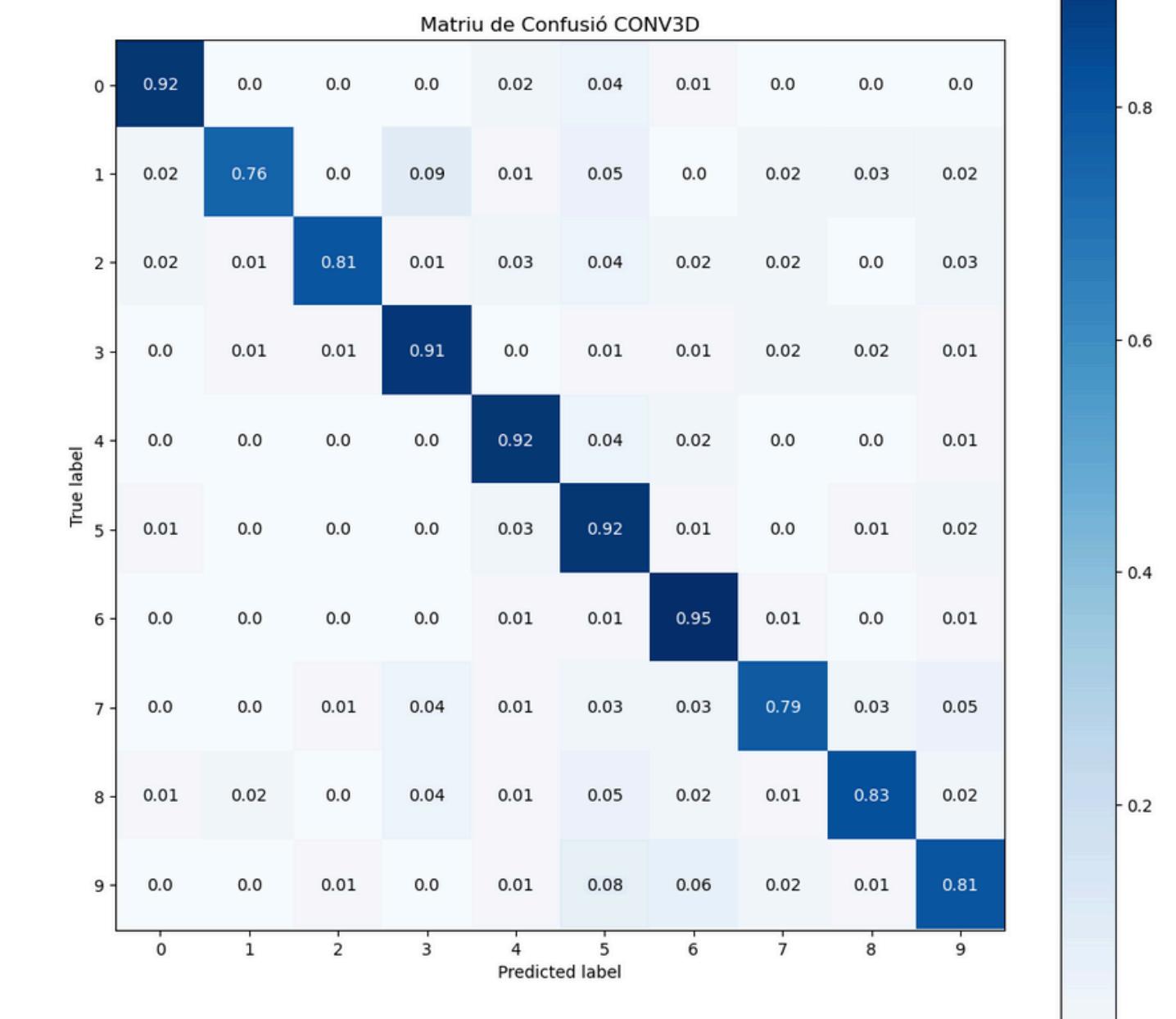
MODEL ENTRENAT AMB 'CONV3D LAYER'



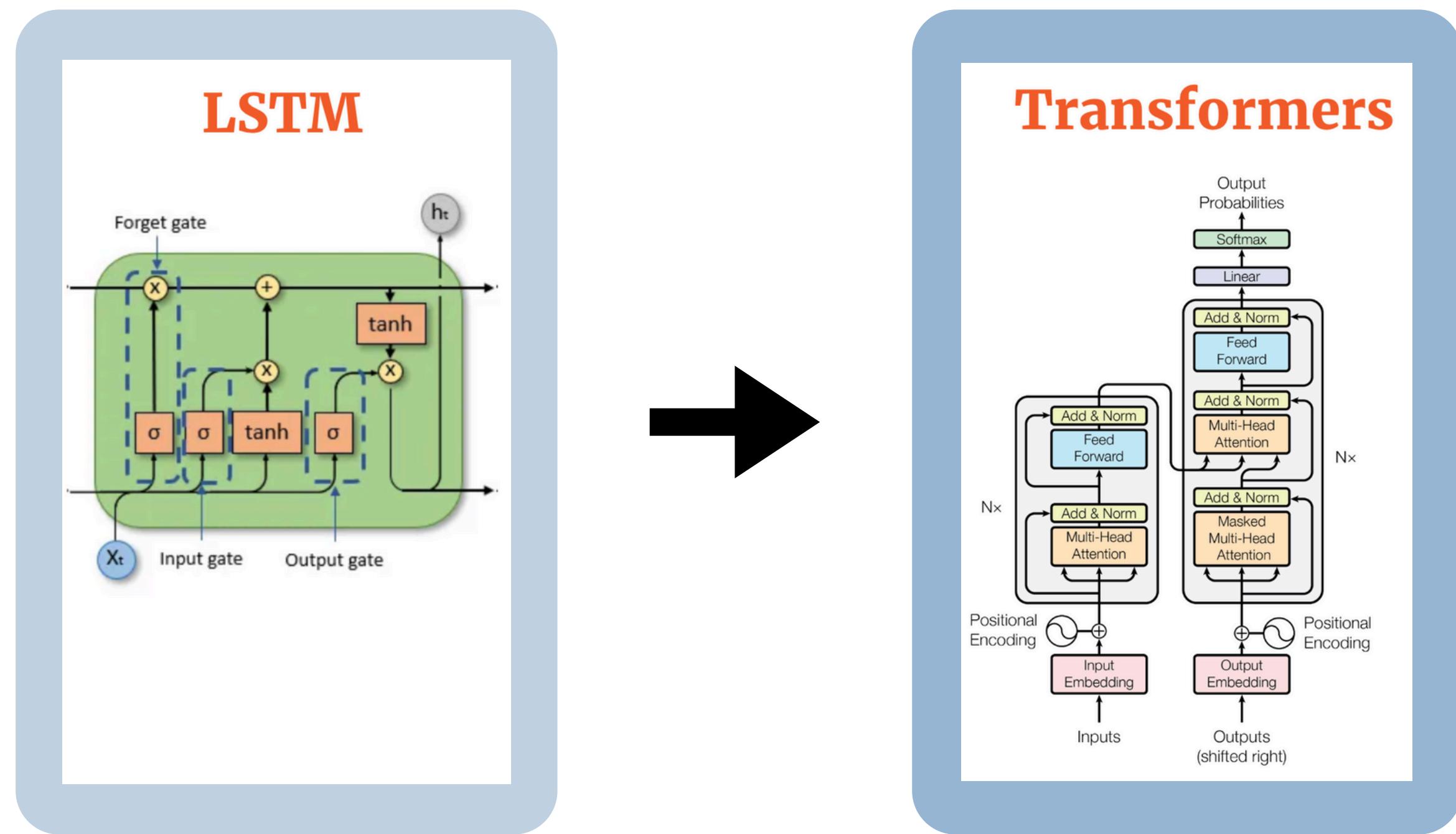
PRECISIÓ MÉS ALTA: **85%**



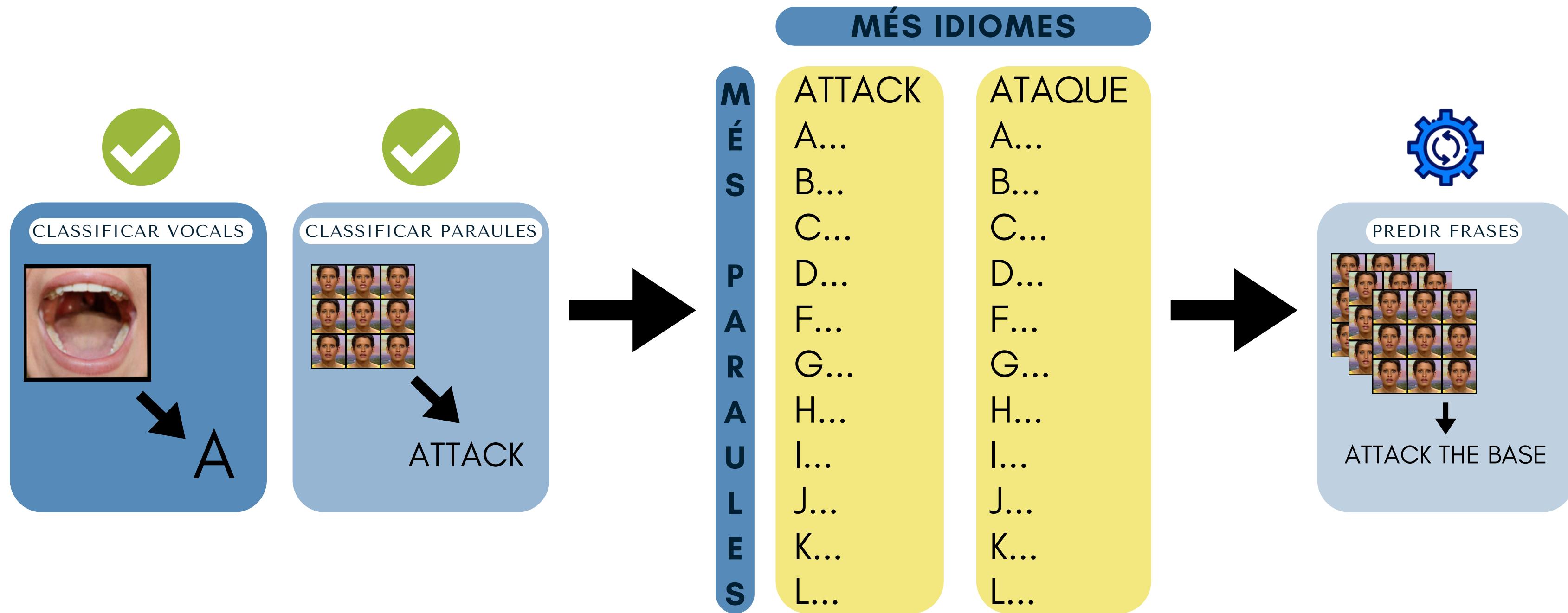
PRECISIÓ DE VALIDACIÓ MÉS ALTA: **70%**



MILLORES A FUTUR



CONCLUSIÓ



iMOLTES
GRÀCIES!

AUTOR:
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MACHACA

TUTOR:
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