

CREANALYT

BETWEEN DATA ANALYSIS AND MEANING

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Special Issue: Critical Technical Practice(s) in Digital Research

CONVERGENCE

Creanalytics: Automating the supercut as a form of critical technical practice

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Abstract

Based on the notion of critical technical practice and its resonances with recent debates in digital film and media scholarship, in this article I outline a type of computational practice that aims to couple the relational-analytic powers of machine learning with the explanatory-creative powers of visual narrative. I provisionally call this approach *creanalytics*. To enact this coupling, I designed a system to annotate and classify a large corpus of film clips, automatically extract fragments from this corpus, and edit them into new compositions, rendered into a *computational supercut*, which I go on to argue can be understood as the minimal expression of a broader emergent form of media: the *computational video essay*. Below I describe the most salient technical aspects of this system, analyse the principles of its design, and discuss the methodological and conceptual possibilities of its use as a format that mediates between critics and their networked environments, and between individual media artefacts, their parts, and the larger collections to which they belong.

Keywords

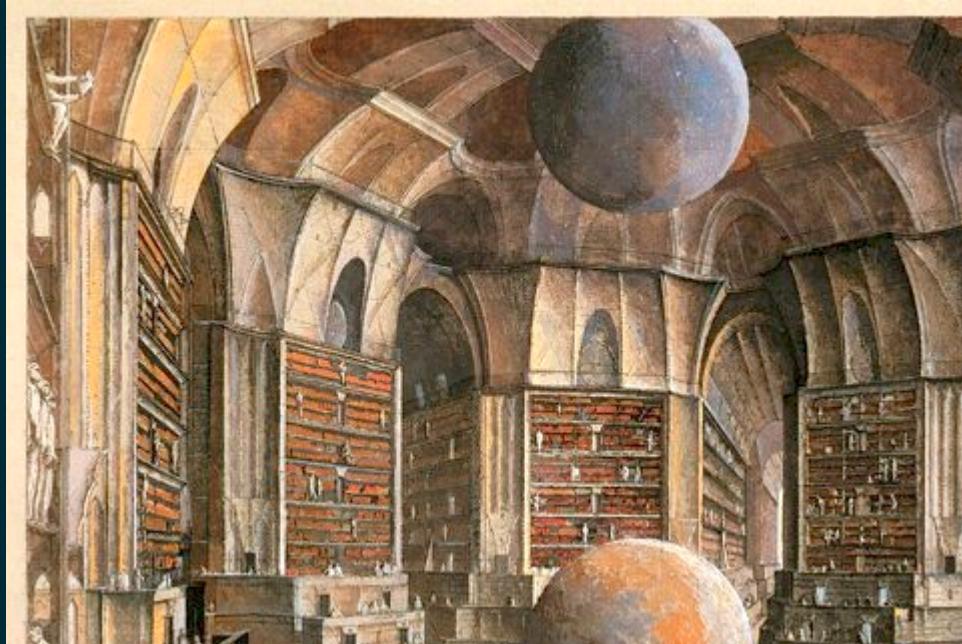
Computational film studies, videographic criticism, machine learning, creative AI, deep learning, supercut, film theory, Hollywood cinema

Introduction

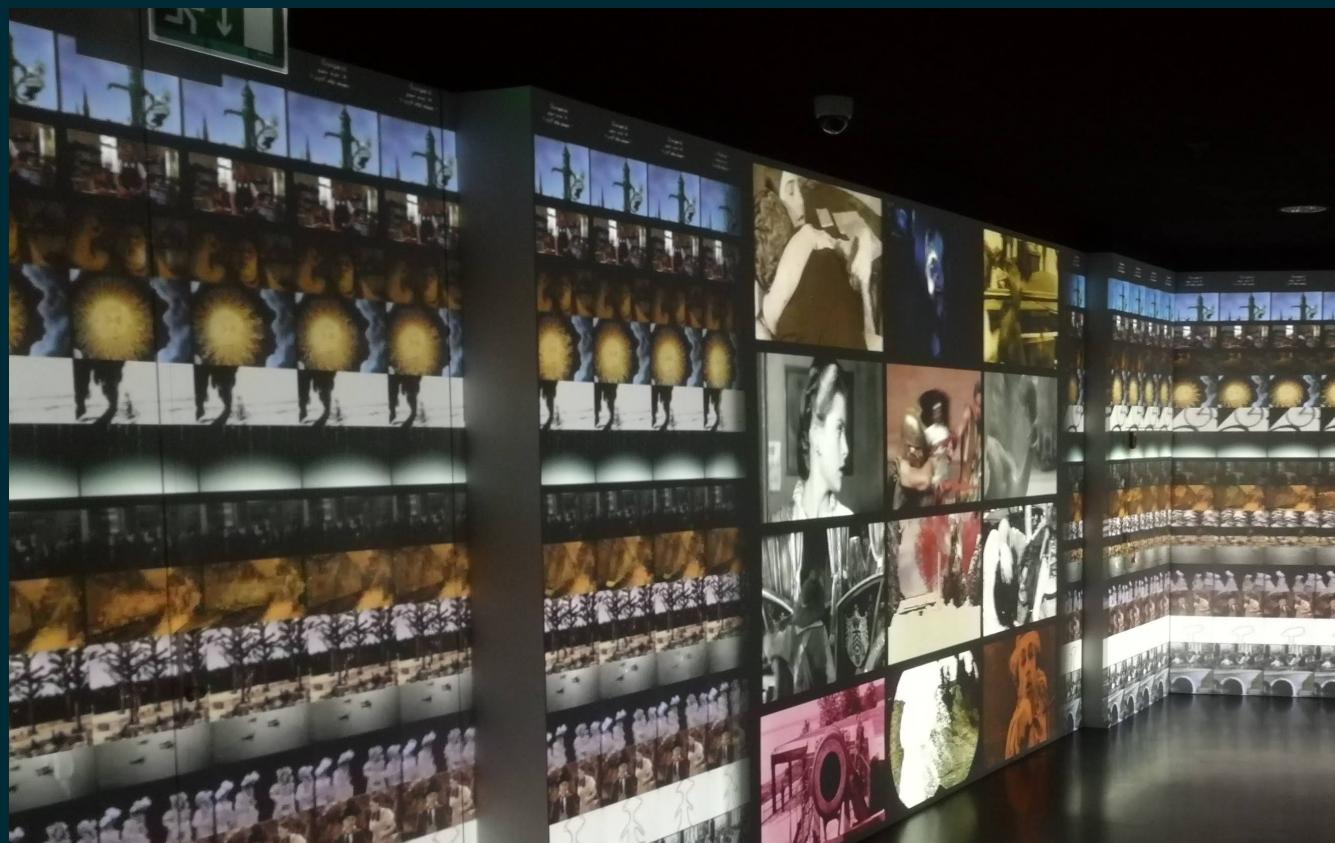
Philip Agre proposed the notion of *critical technical practice* as a way to steer research in the field of

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ARCHIVES AND D...



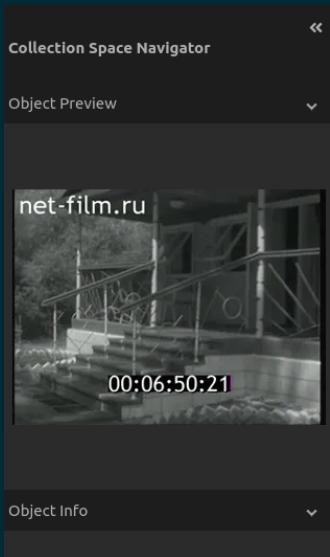
MOVING IMAGE ARCHIVES A



Artefact	Processing level	Example
Cinema	Social – aggregate	Popular Hollywood cir
Film	Human	Jurassic Park (1993)
Clip	Human/computer	Raptors in the Kitchen
Shot	Human-computer	130 frames (5.421 s)
Frame	Computer/human	Individual frame (512
Pixels	Numeric – disaggregate	Vector ([176800x1]);

CREANALYT

(DATA) ANALYSIS THROUGH (CREA)



SUPERCUTS (DATA) SAMPLING THROUGH (VID)

Just as capitalism treated workers as machines and replaced by machines, so also supercutters simulate anticipation of a moment, perhaps in the near future able to search the entirety of digitized film histories themselves, automatically

- Max Tohline, 2021

In the near future there will be a simple software or keywords and other elements of interest, which will produce a perfect supercut of media content of any kind.

- Miklós Kiss, 2013

AUTOMATING THE SURF

MOVIE CLIPS YOUTUBE



Blade Runner (1982) - Movie

movieclipsFILM

12 videos 58,630 views Last updated on 2 Jun 2021

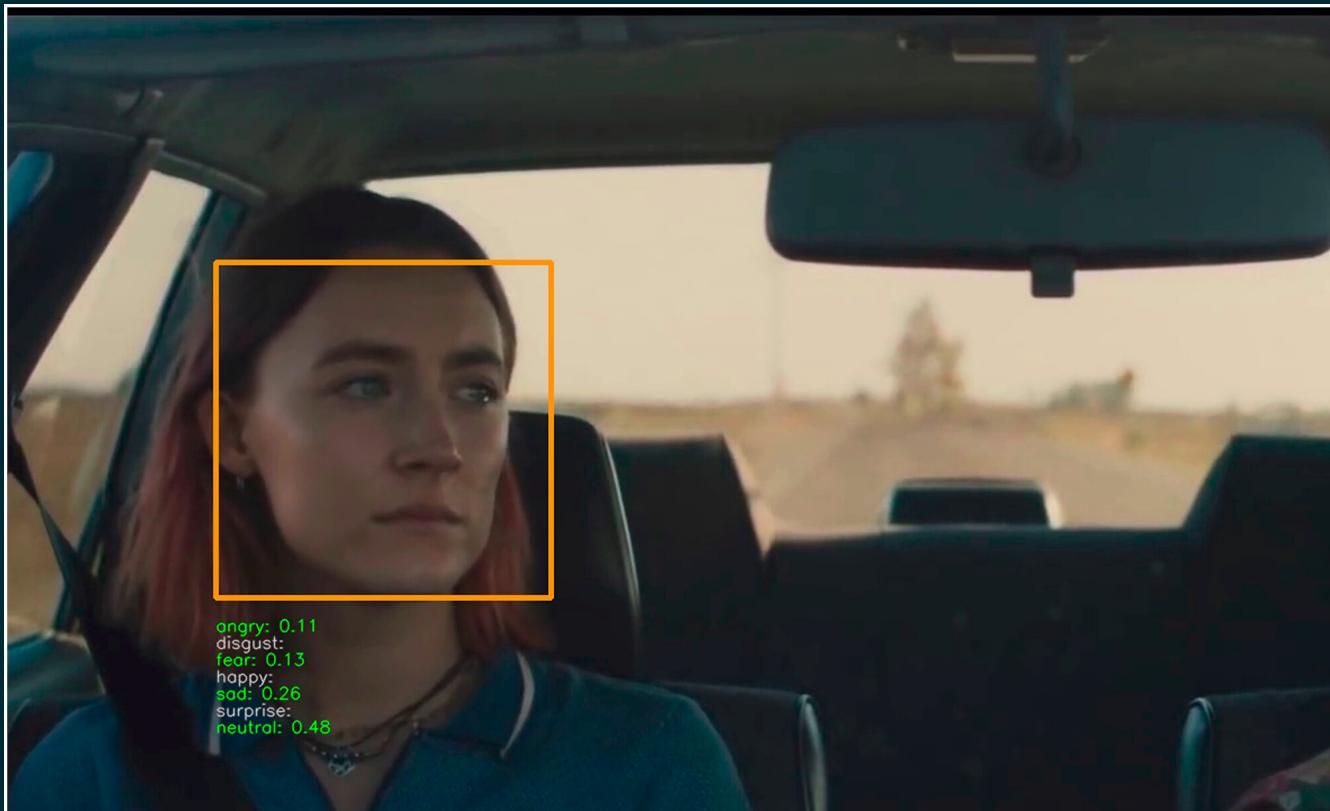
Play all Shuffle

- **Blade Runner (1/10)**
Movieclips • 1.4M views • 11 y
- **Blade Runner (2/10)**
Movieclips • 418K views • 11 y
- **Blade Runner (3/10)**
Movieclips • 824K views • 11 y
- **Blade Runner (4/10)**
Movieclips • 418K views • 11 y
- **Blade Runner (5/10)**

MOVIE CLIPS CORP

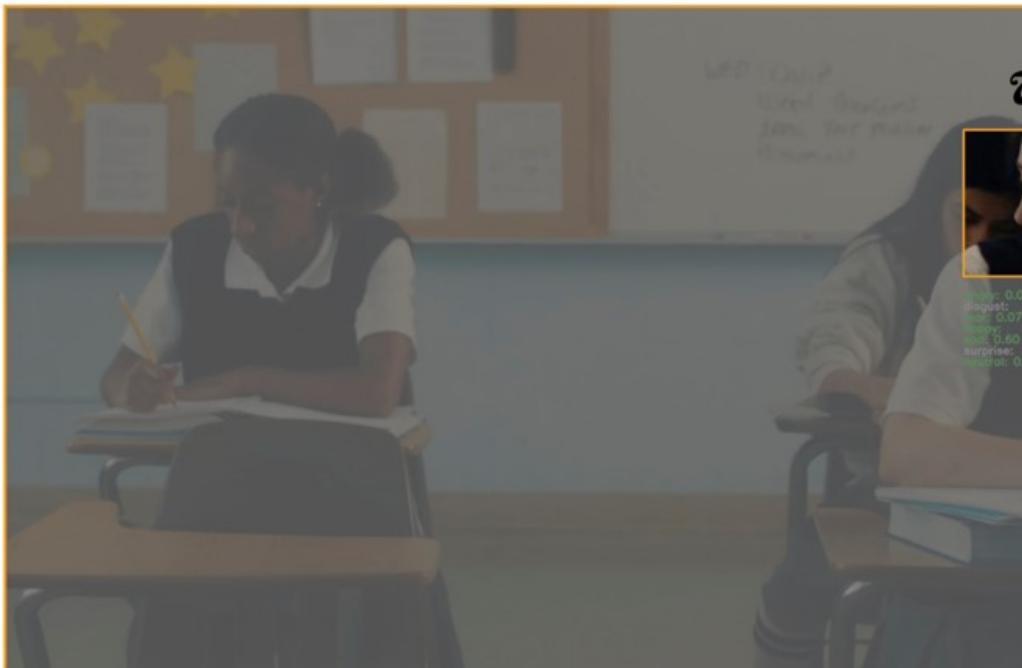
- 2691 clips
- 350 films
- From 1931 to 2011
- 287 unique directors

PRE-TRAINED FER DET



SHOT SCALE DETEC

W



Feature

People

Scale

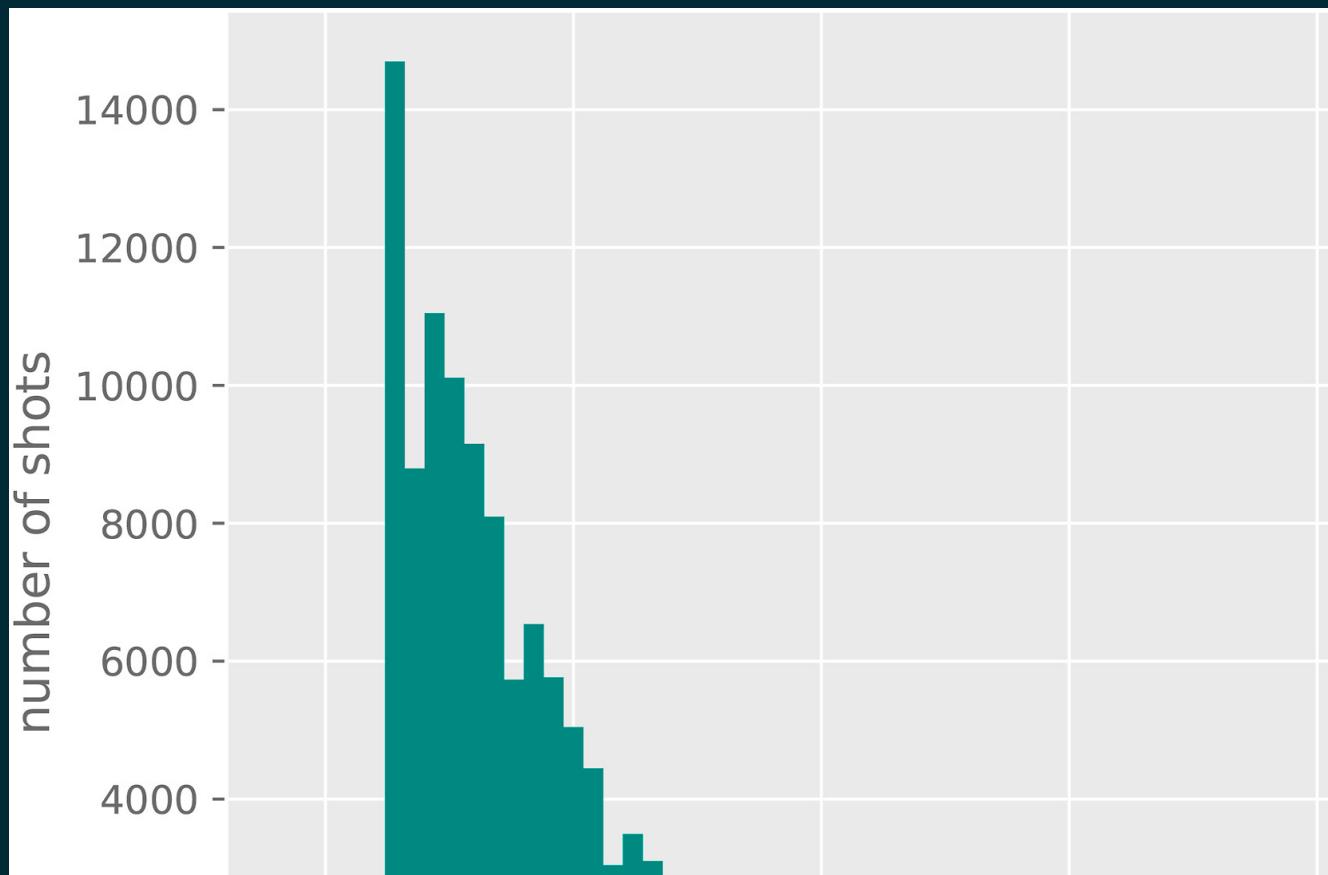
Inferred motion

Scale category

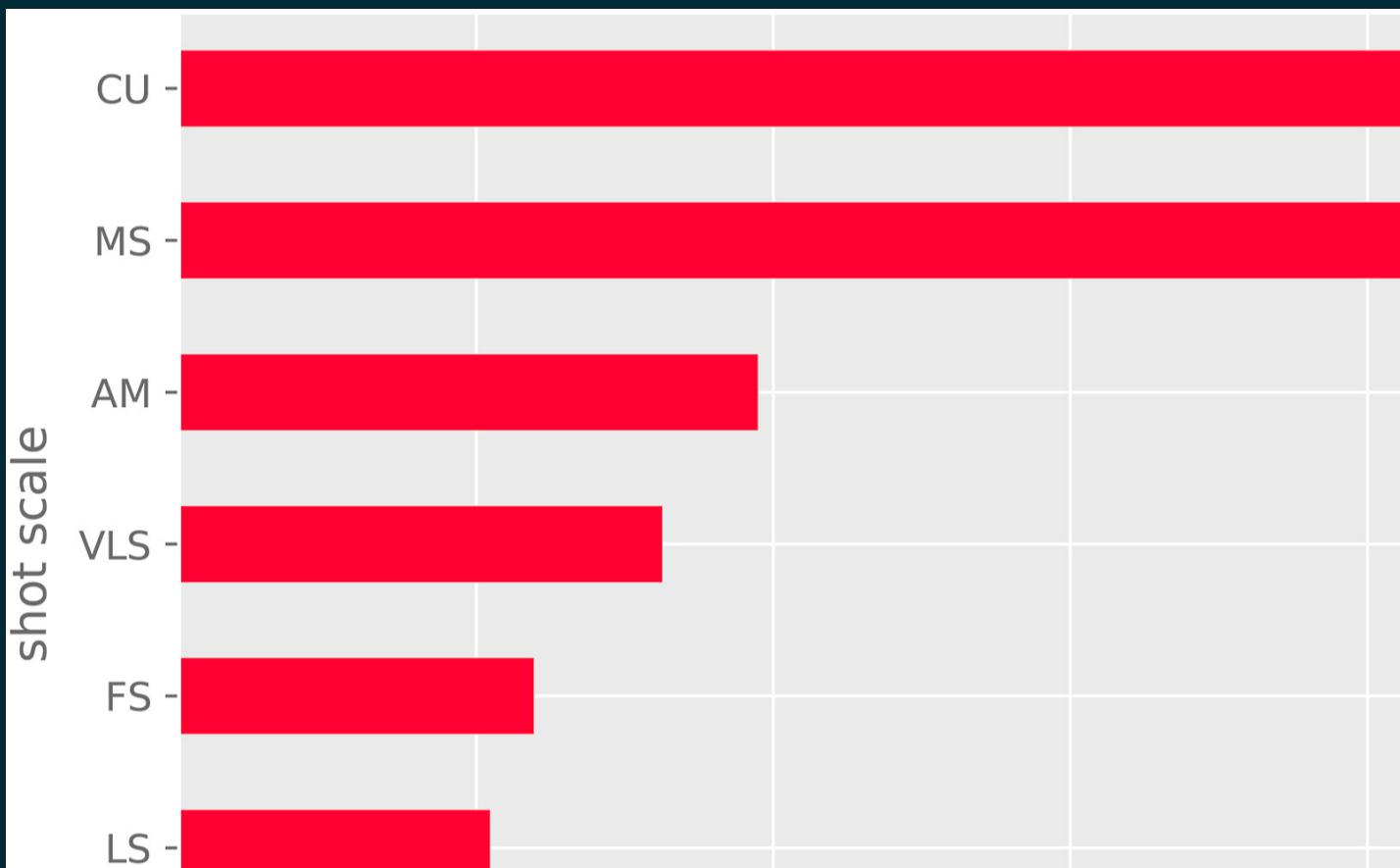
Inferred motion category

Top emotion

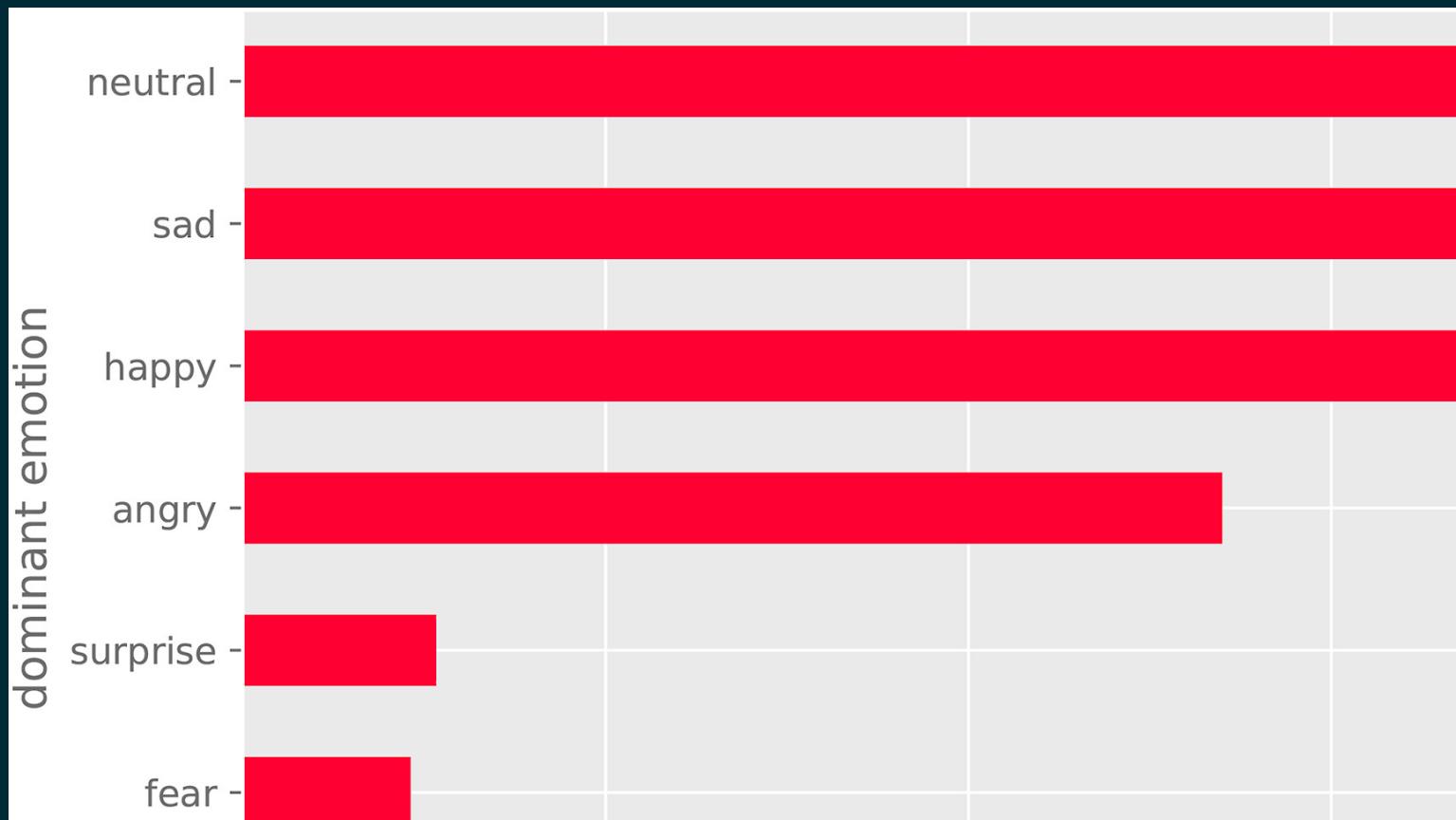
SHOT DURATION DISTRIBUTION



SHOT SCALE BREAKDOWN



SHOT EMOTION BREAK



SHOT SCALE SUPER

Computational Supercuts

These supercuts are created semi-automatically through a combination of techniques, including shot-boundary detection, emotion



Big Angry Faces v.01



Sad Dramas v.01



Full Shots in Drama v01

MOVING IMAGE ARCHIVE

...in which value is created through the computation of moving imagery; visual culture that feeds AI that feeds us.

MOVING IMAGE ARCHIVE

- Structurally similar to a dataset
- Accessed through narrative form
- Shaped and reshaped on demand

