Conversational intelligence - stories of developing and using
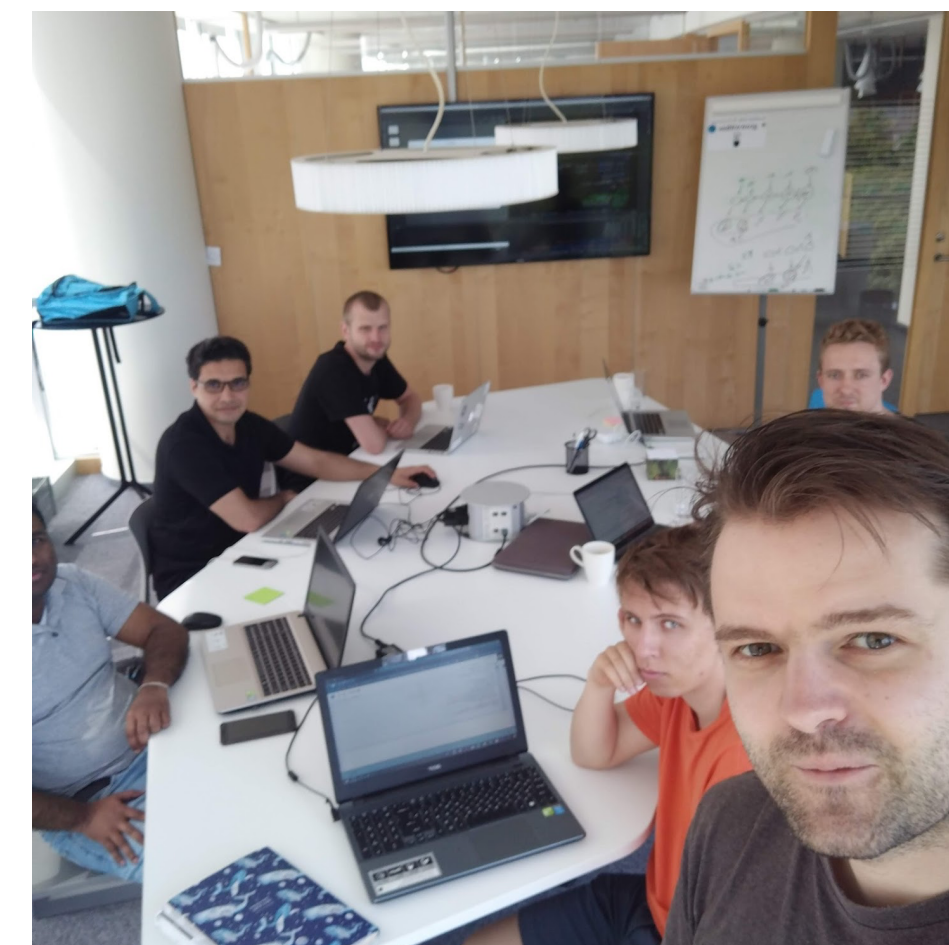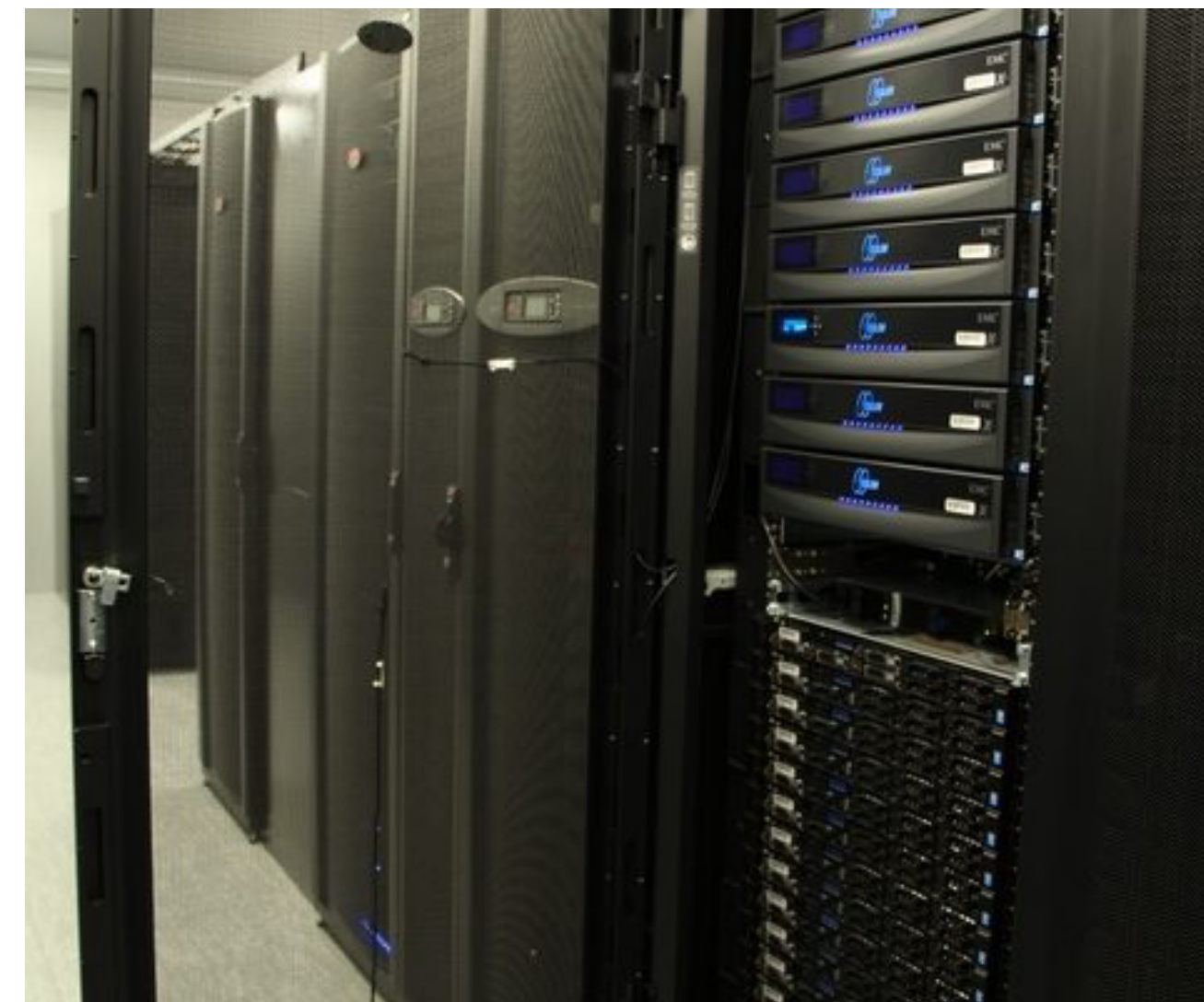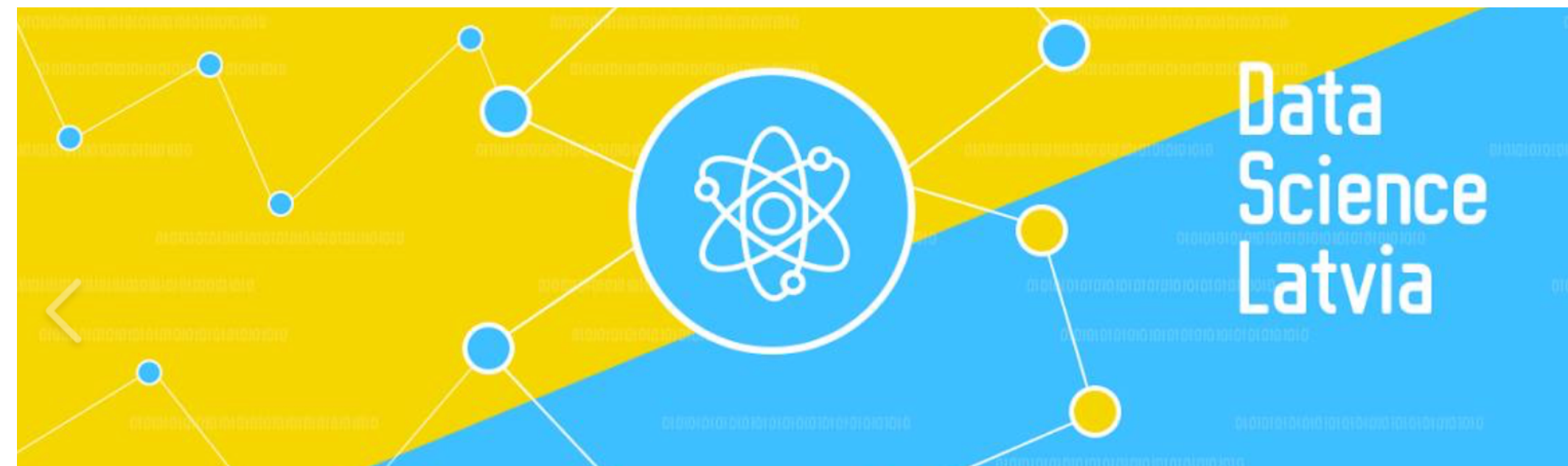
Pitch Patterns

Dr. Evalds Urtans

More than 10 different open-source projects
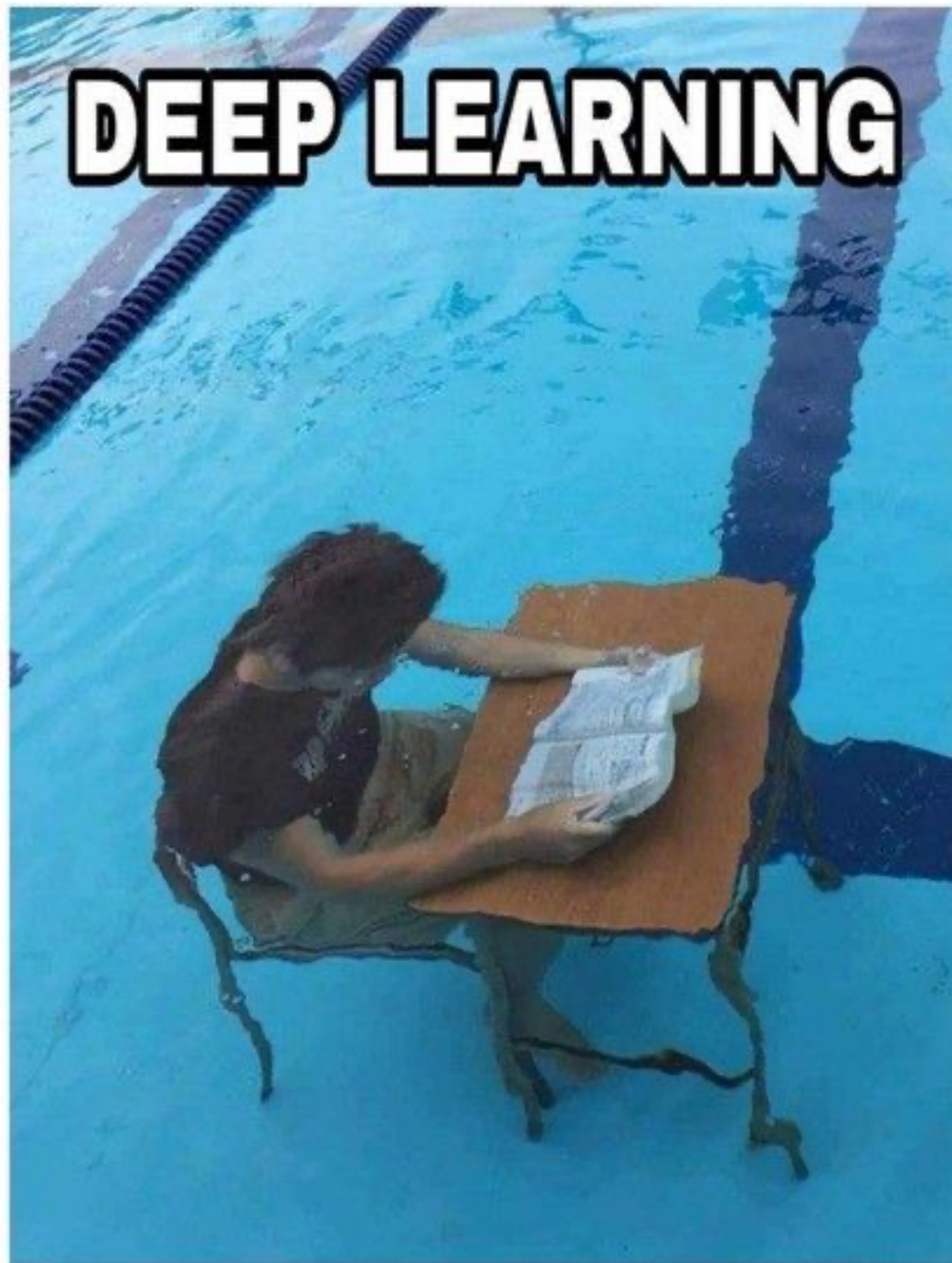www.yellowrobot.xyz

Data Science Latvia

Team

Experienced sales team
Award-winning UX designers
Award-winning AI scientists
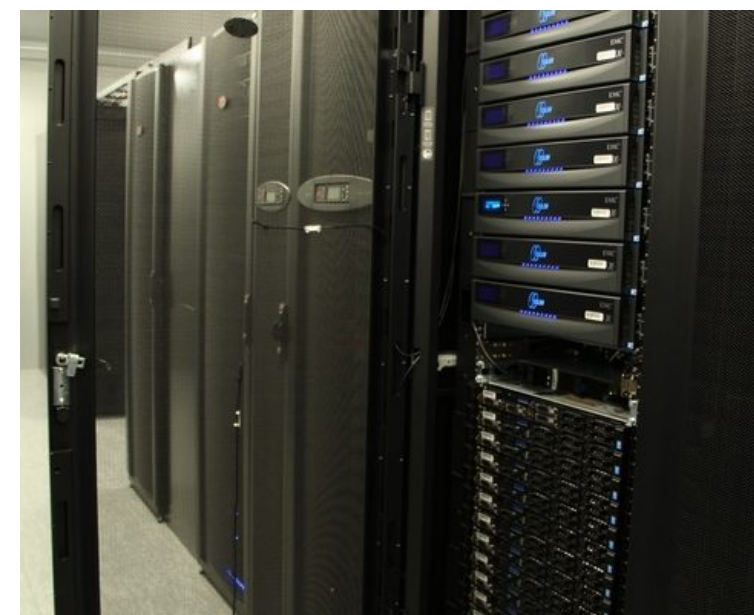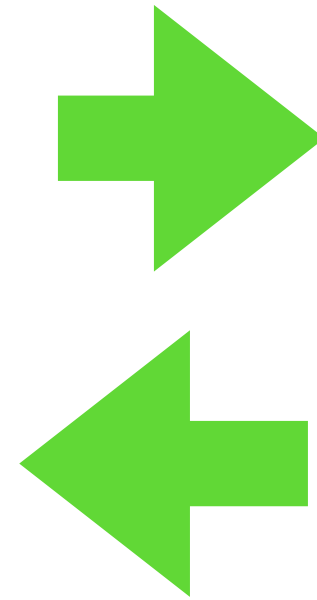
What is the AI?

What is AI?

What is the AI?

$$i_t = \sigma(W_i * [\mathcal{X}_t, \mathcal{H}_{t-1}] + b_i)$$

$$f_t = \sigma(W_f * [\mathcal{X}_t, \mathcal{H}_{t-1}] + b_f)$$

$$e_{t,z} = V_e \cdot \tanh(W_e * [\mathcal{X}_{t,z}, \mathcal{H}_{t-1}] + b_e)$$

$$\alpha_{t,z} = \frac{\exp(e_{t,z})}{\sum_{j=1}^{\tau} \exp(e_{t,j})}$$

$$p_t = \sum_{j=1}^{\tau} \alpha_{t,j} \tilde{\mathcal{X}}_{t,j}$$

$$n_t = \sigma(W_n * [\mathcal{X}_t, \mathcal{H}_{t-1}] + b_n)$$

$$g_t = \tanh(W_g * [p_t, \mathcal{H}_{t-1}] + b_g)$$

$$\mathcal{C}_t = f_t \circ \mathcal{C}_{t-1} + i_t \circ a_t + n_t \circ g_t$$

$$a_t = \tanh(W_a * [\mathcal{X}_t, \mathcal{H}_{t-1}] + b_a)$$

$$o_t = \sigma(W_o * [\mathcal{X}_t, \mathcal{H}_{t-1}] + b_o)$$

$$\mathcal{H}_t = o_t \circ \tanh(\mathcal{C}_t)$$

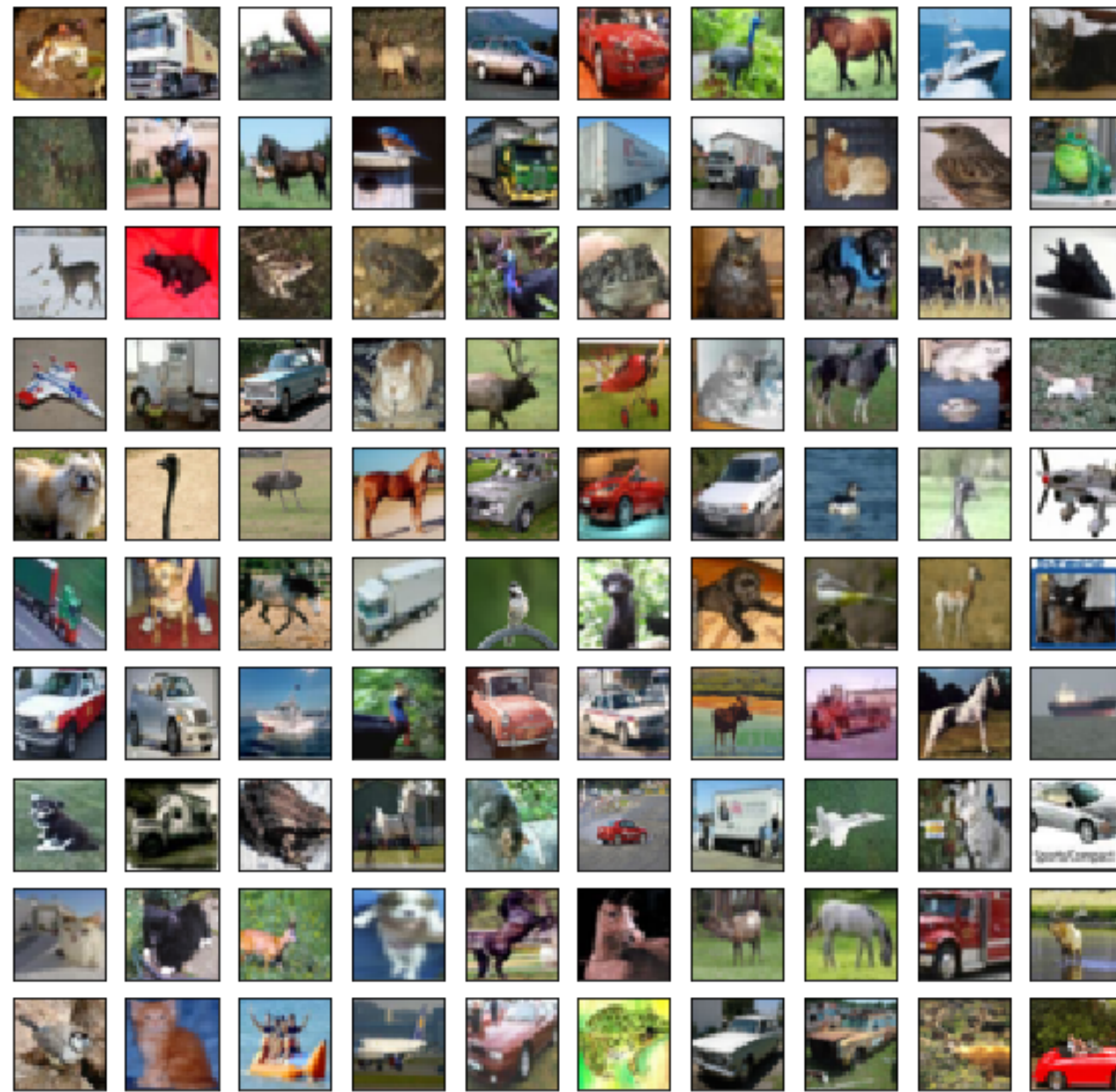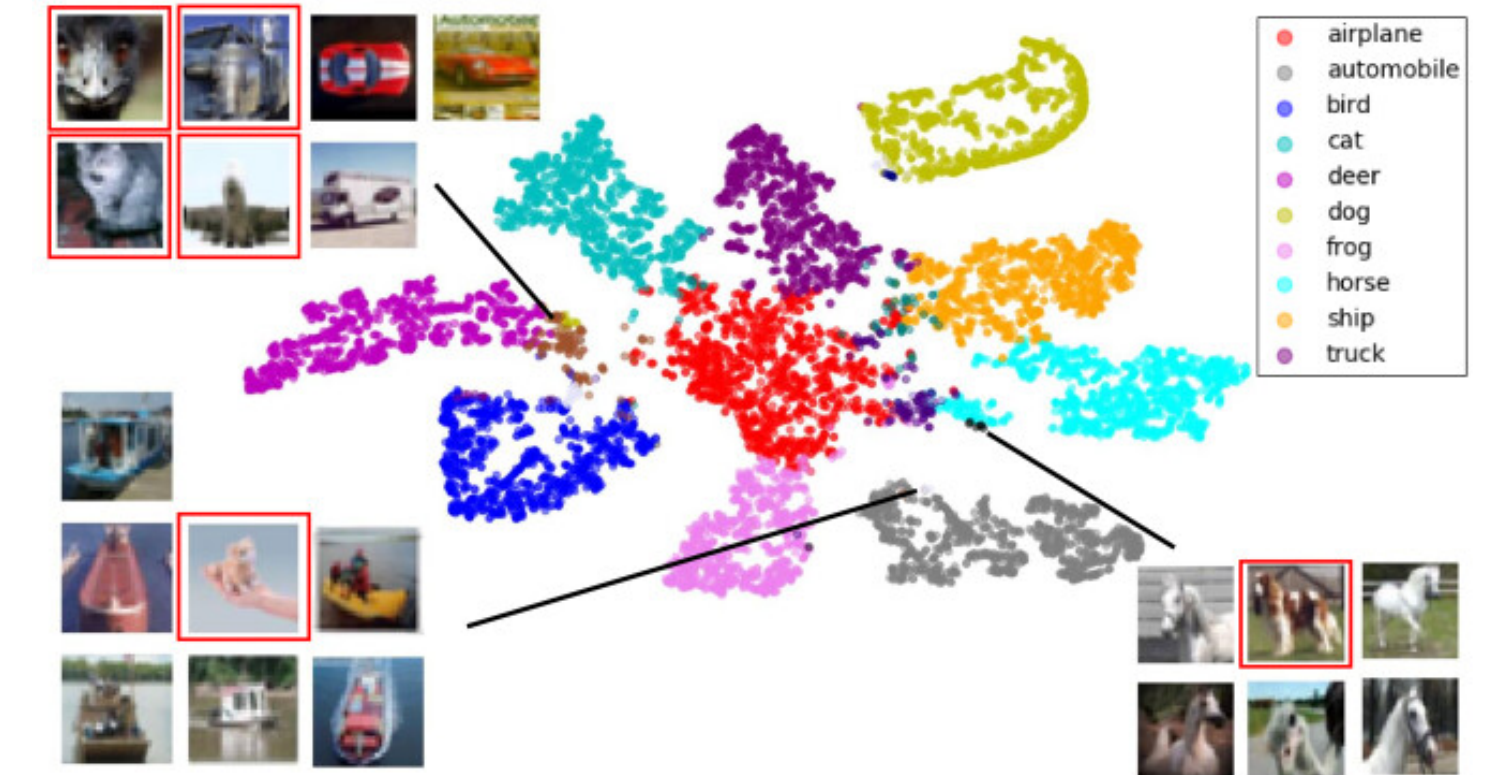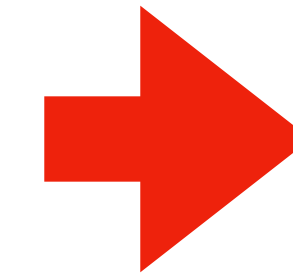# What is the AI?

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$$\mathcal{H}_t = o_t \circ \tanh(\mathcal{C}_t)$$

What is AI?

- **Linear algebra**
- **Calculus**
- **Probability theory**
- **Information theory**
- **10% programming**

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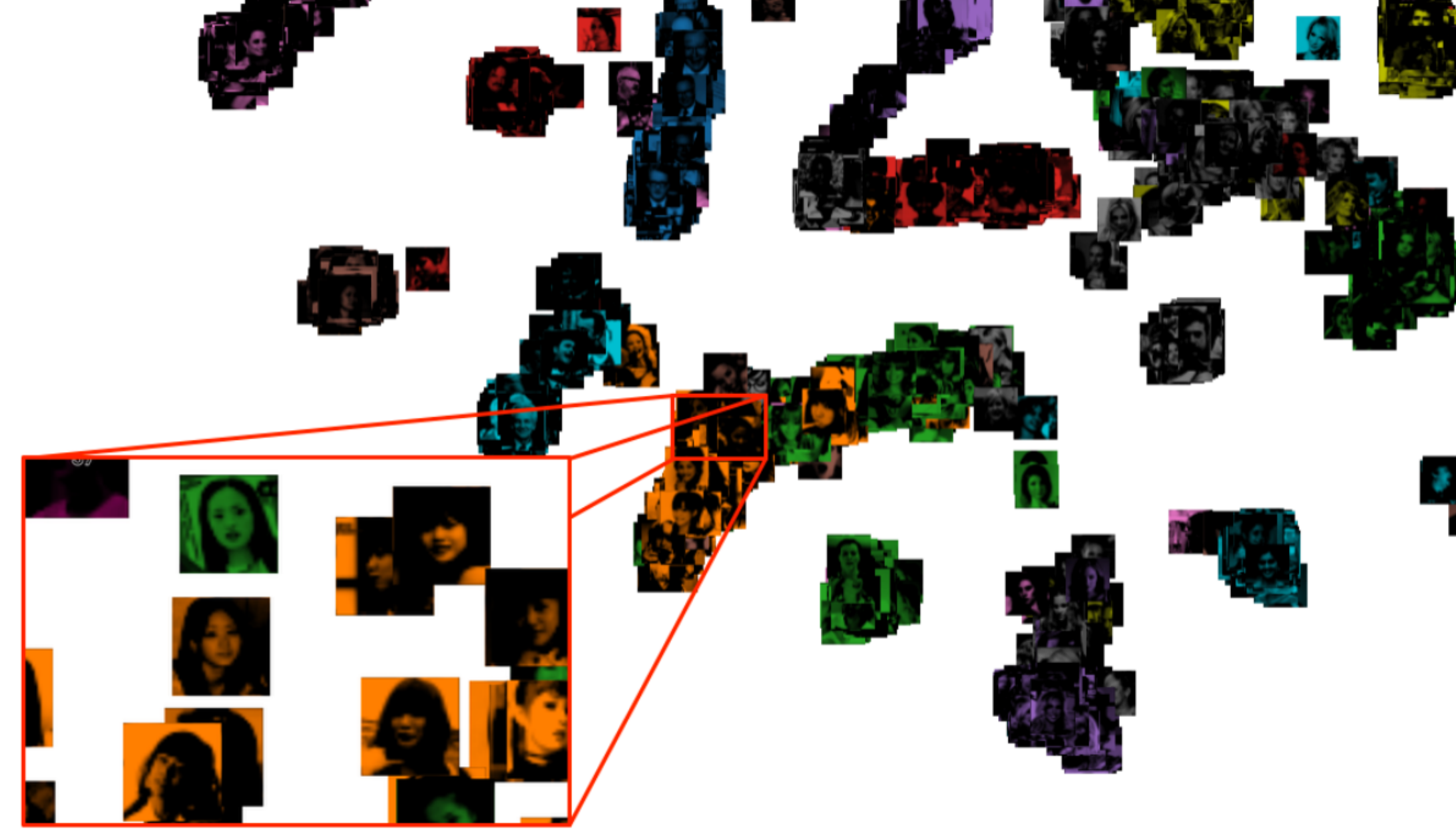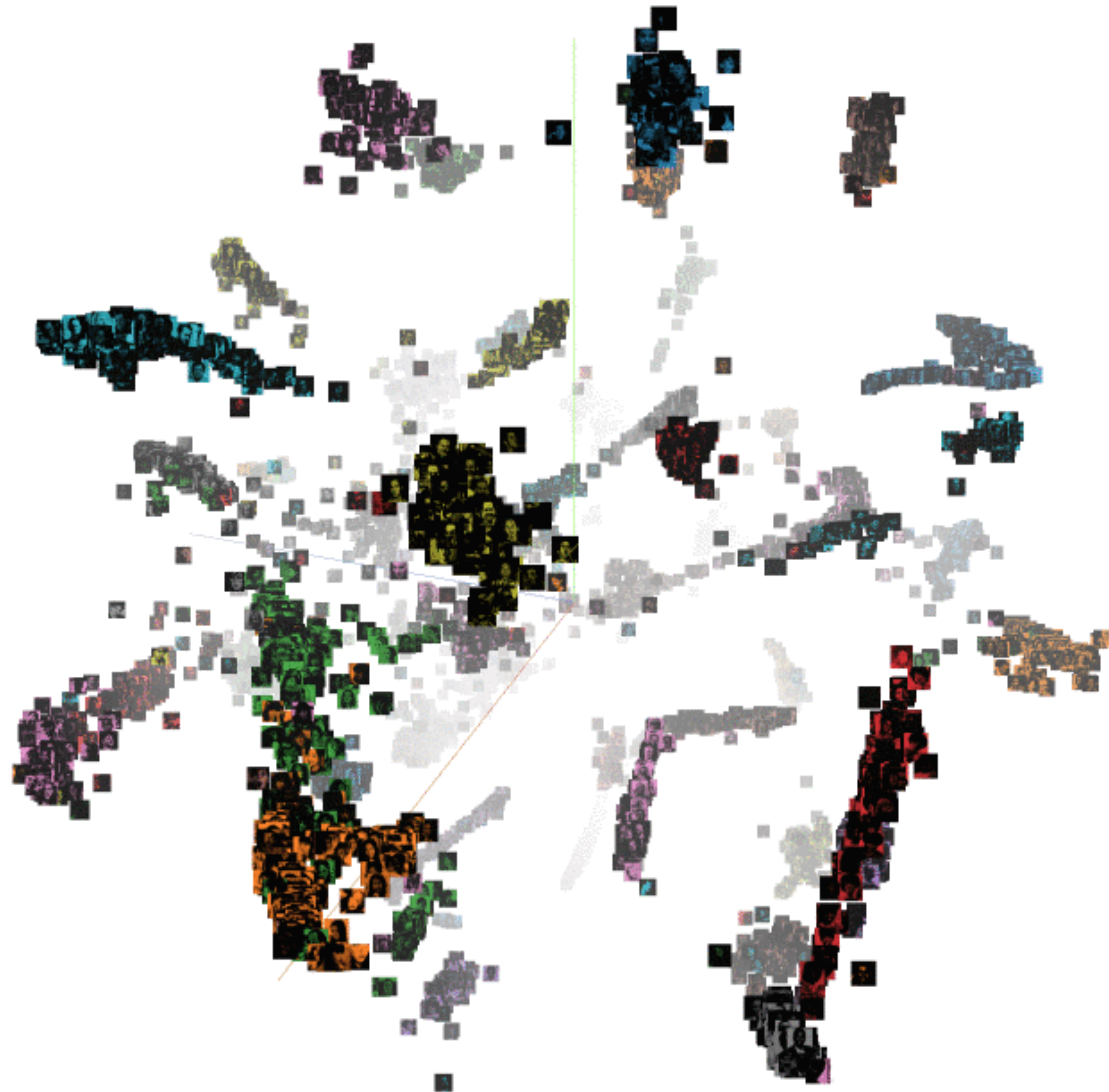$$g_t = \tanh(W_g * [p_t, \mathcal{H}_{t-1}] + b_g)$$

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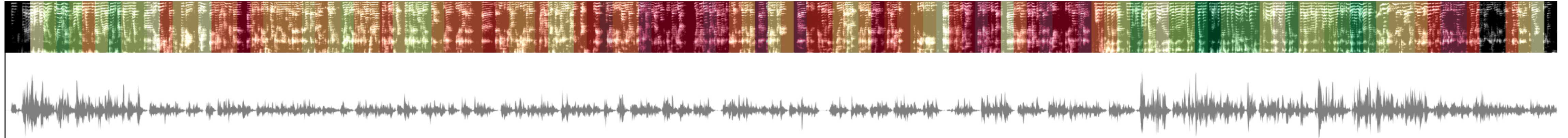$$\mathcal{H}_t = o_t \circ \tanh(\mathcal{C}_t)$$

FaceID

Exponential triplet loss, ICCDA 2020

VoiceID

asya

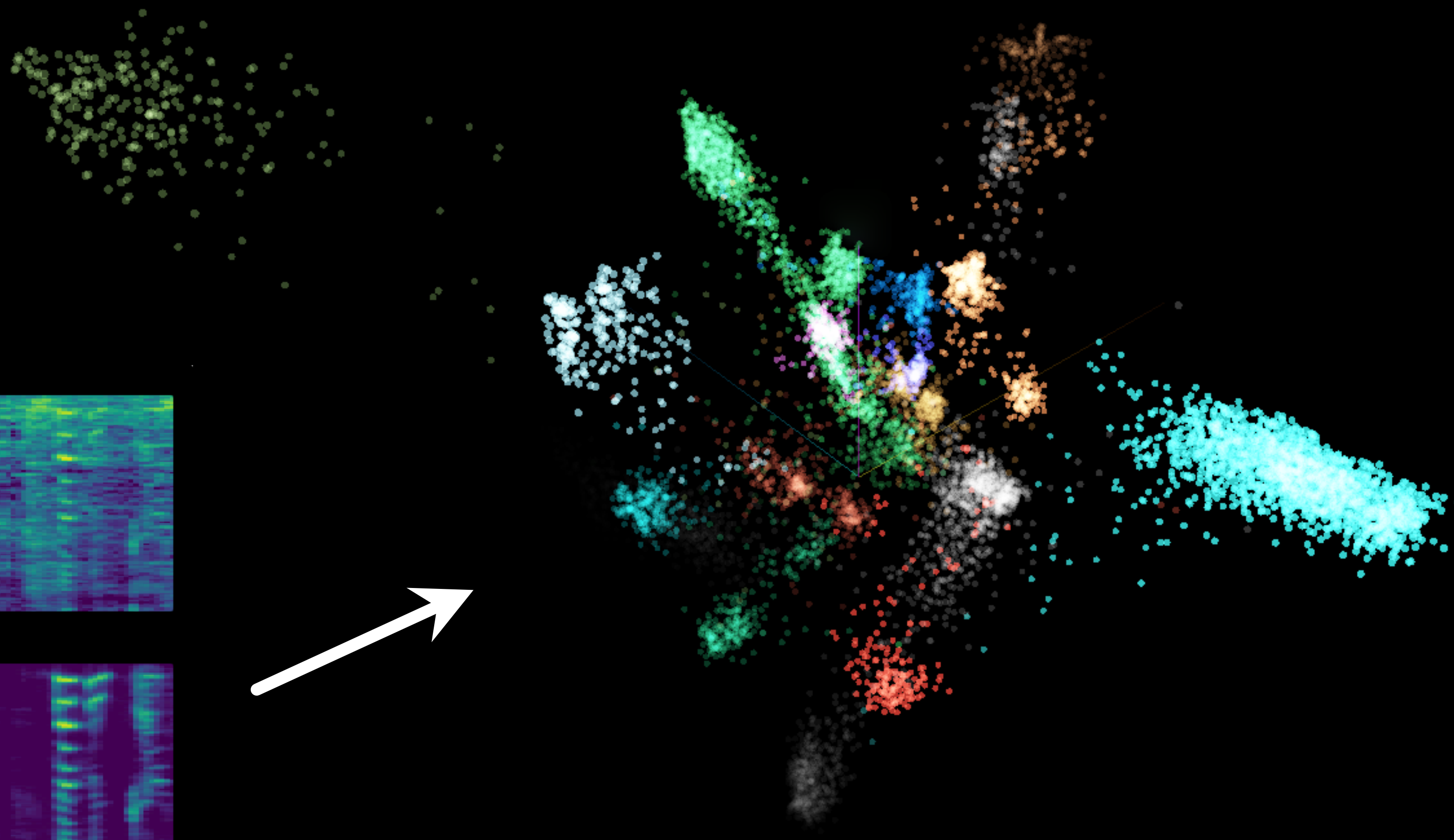* Green frames represent target speaker. Red frames are furthest away from target speaker.
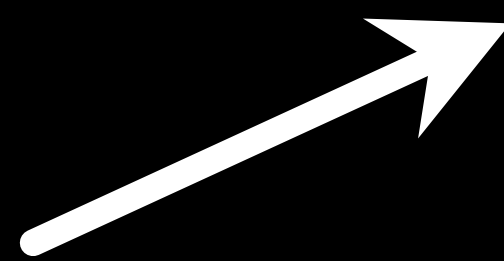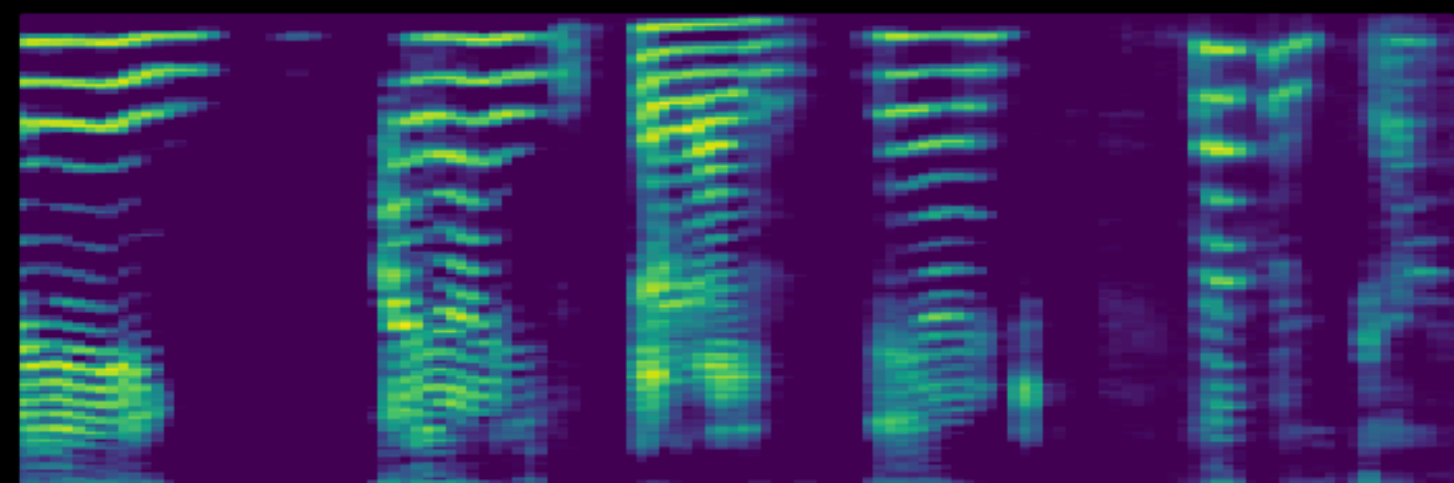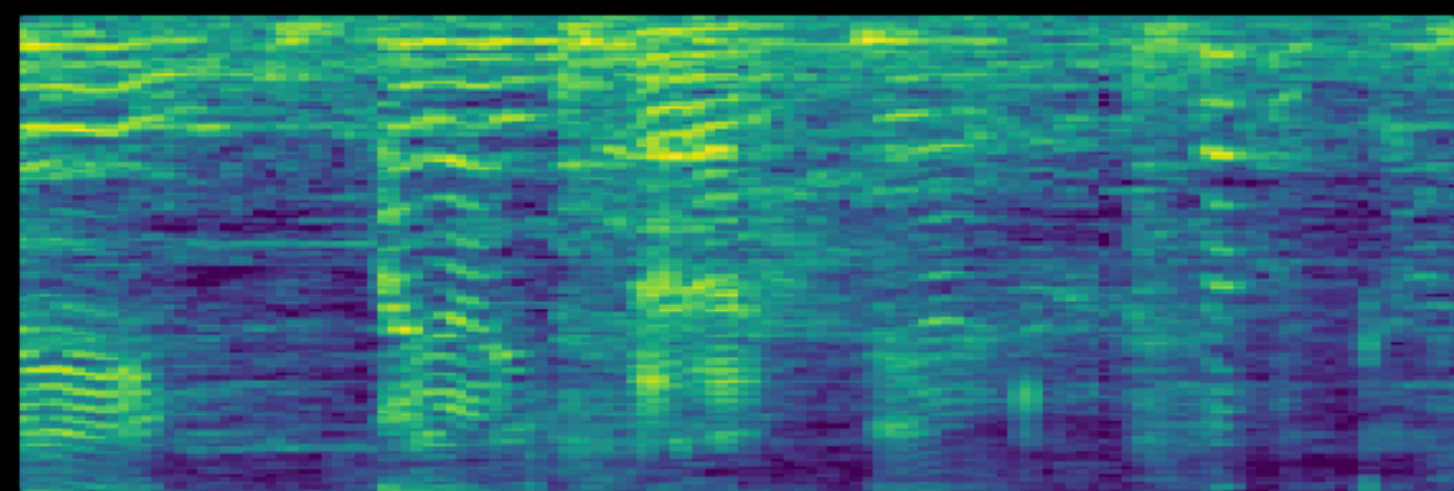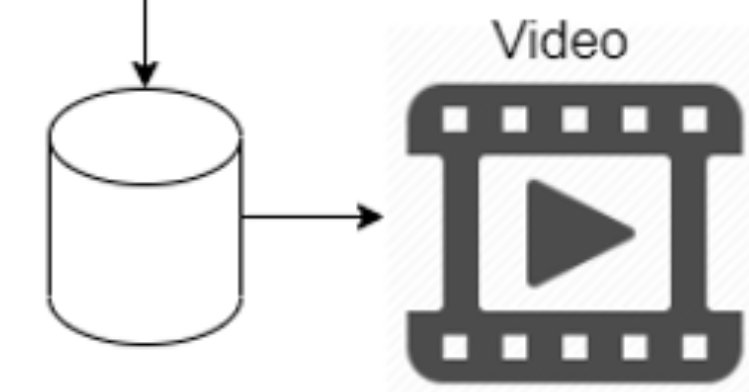
▶ PLAY   ■ STOP

Demo:
https://yellowrobot.xyz/asya_demo.html

Exponential triplet loss, ICCDA 2020

Speech enhancement

Emotions

Metadatu izgūšana un failu organizēšana

Datu kopa

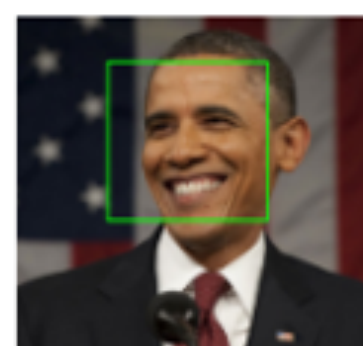Video

kadru izgūšana

Seju detektēšana

Audio izgūšana
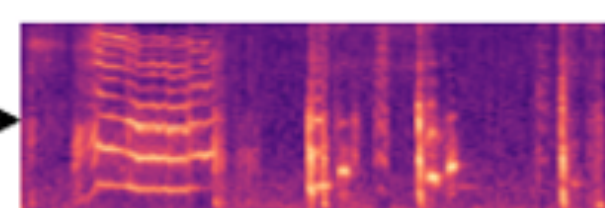
Mel spektrogrammas izgūšana
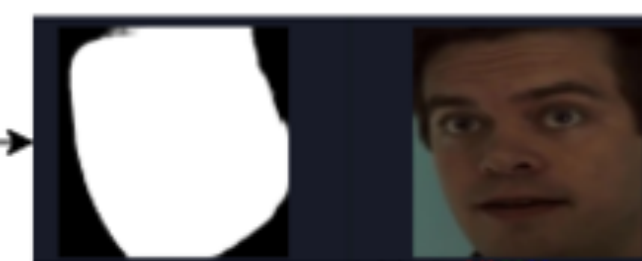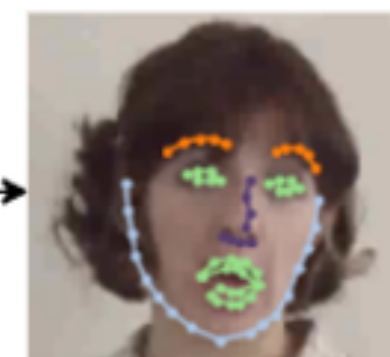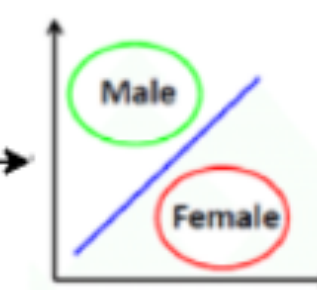
Seju kodēšana

Sejas segmentācija

Sejas punktu detektēšana + rotācijas noteikšana

Sejs leņķu noteikšana

Dzimuma klasificēšana

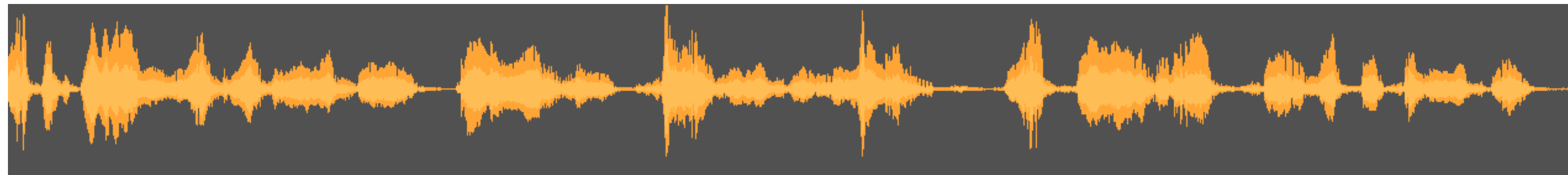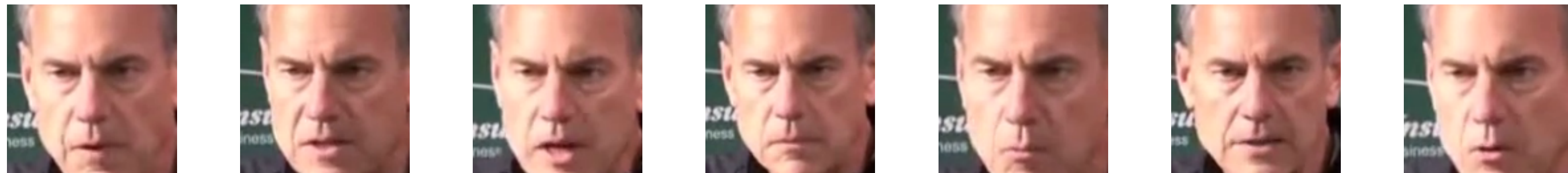Maskas un rotācijas kombinēšana

Emotions

Happiness

Interview of winners after a game

Anger

Interview of losers after a game

Emotions

Cycle-GAN

Star-GAN

Let's put a smile on your face, AIxHMI 2022

STT & Content
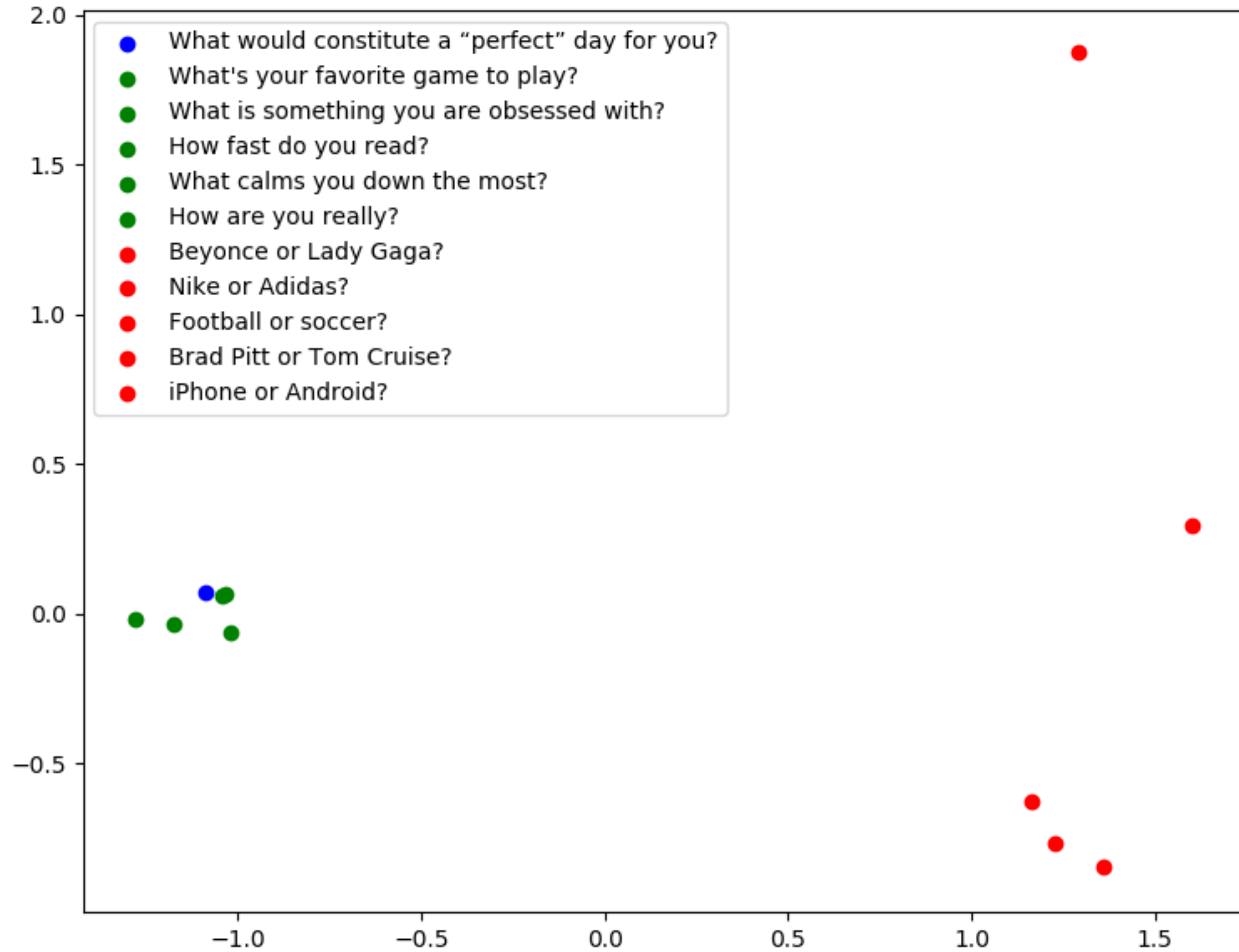
Mobile App "Closer to You"
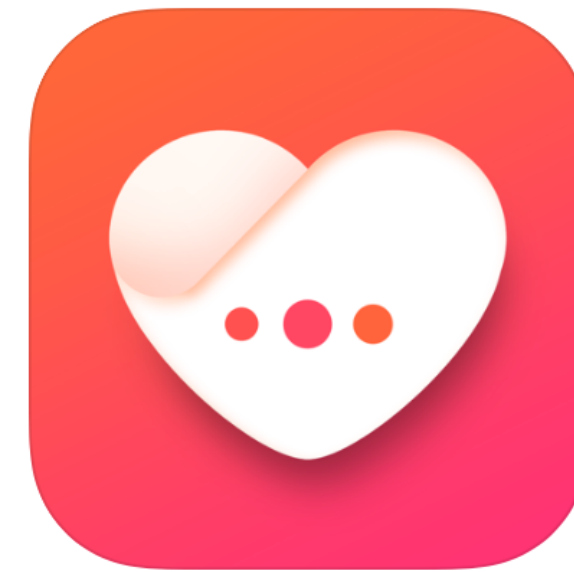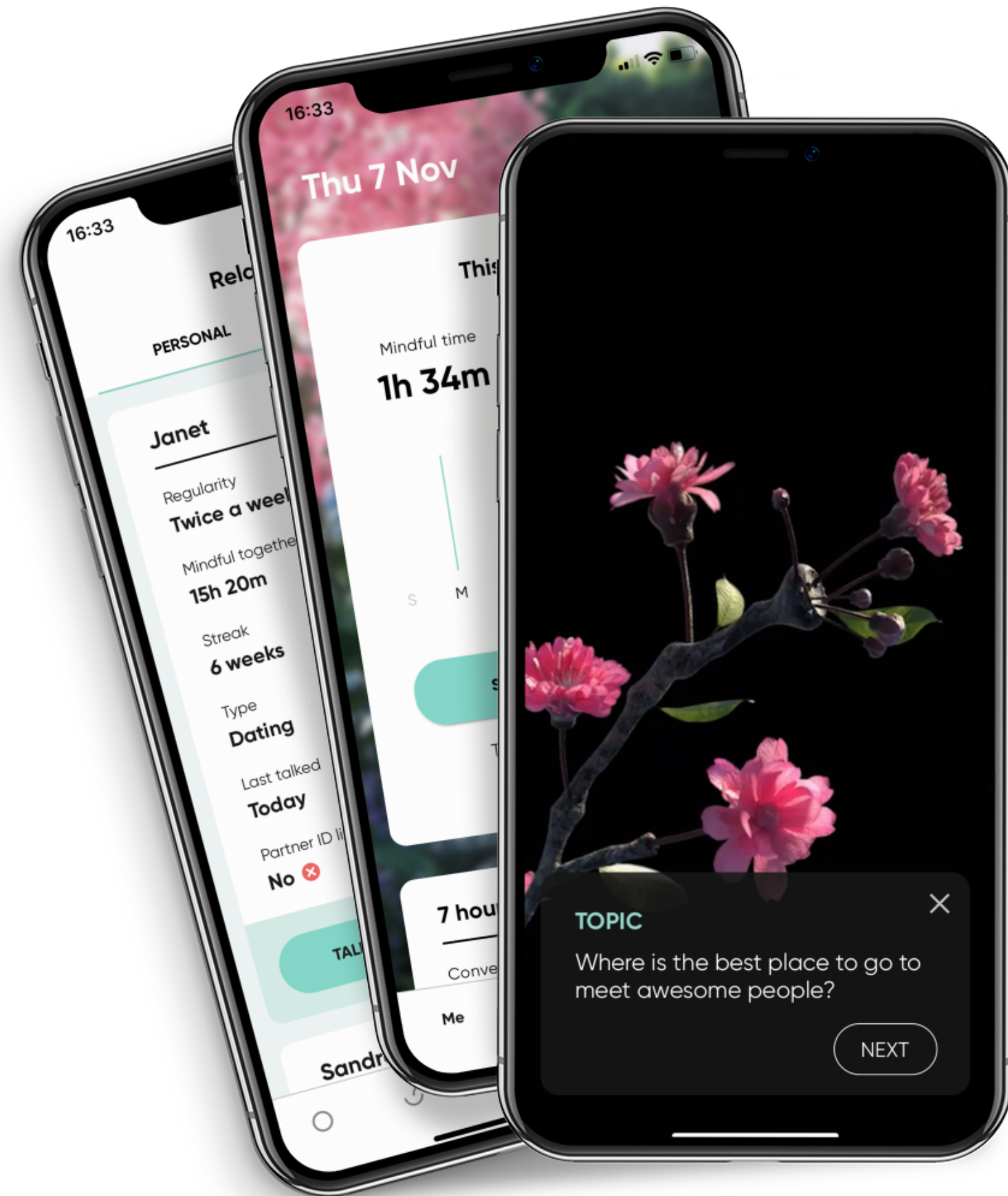
Closer to you: Couple's game [17+]
Healthy marriage with fun talk
Asya SIA

★★★★★ 5.0 • 214 Ratings

Free · Offers In-App Purchases

iPhone Screenshots

EXAMPLE TOPIC
"What was your favorite part about our first kiss?"

closer to you

More than 6000 conversation starters.

TOPIC
What do you think is my favorite sex position? Can you guess?

Emotion detection AI. Reach goals.

Well done

Topics
10 /13
Positive moments
12 /30
Listening moments
21 /30

Conversation
23m
Level
1 /13

Laughter that brings you closer.

closer to you
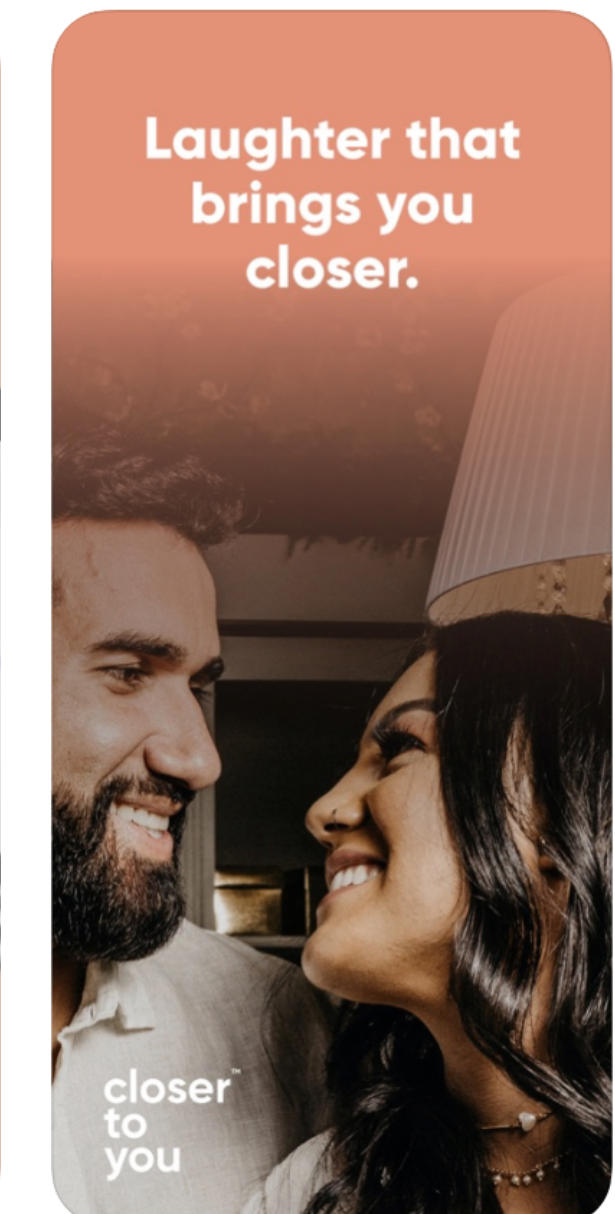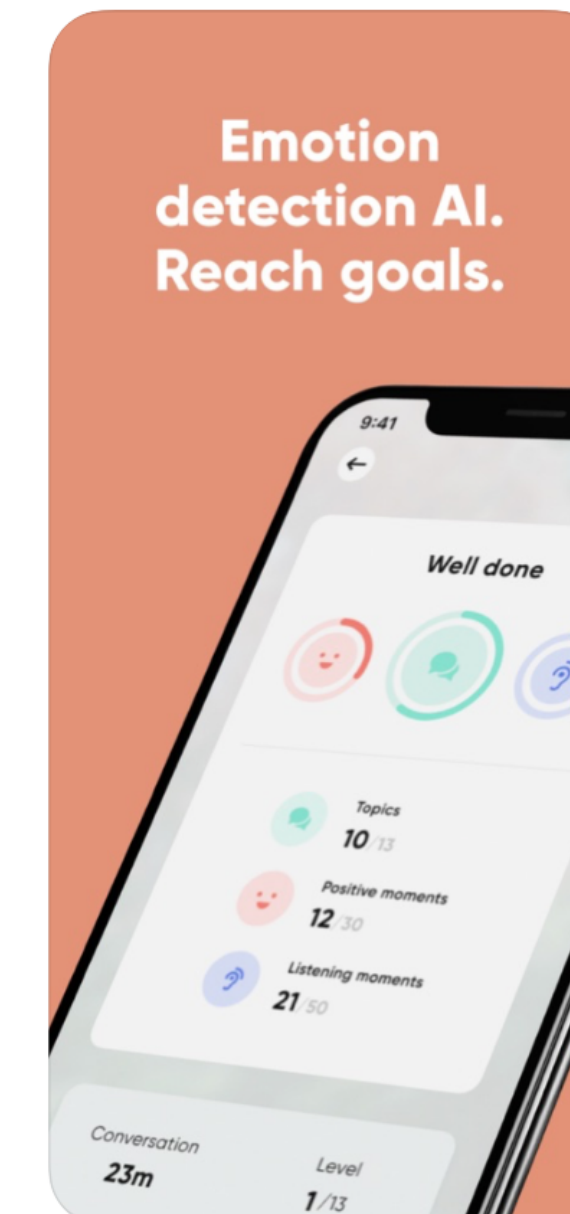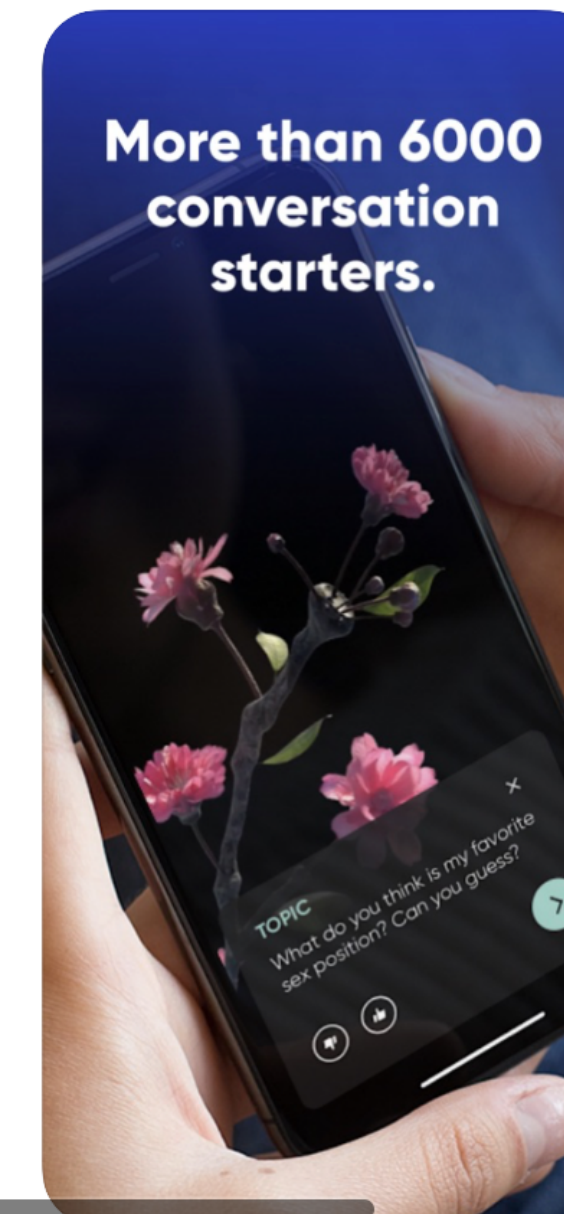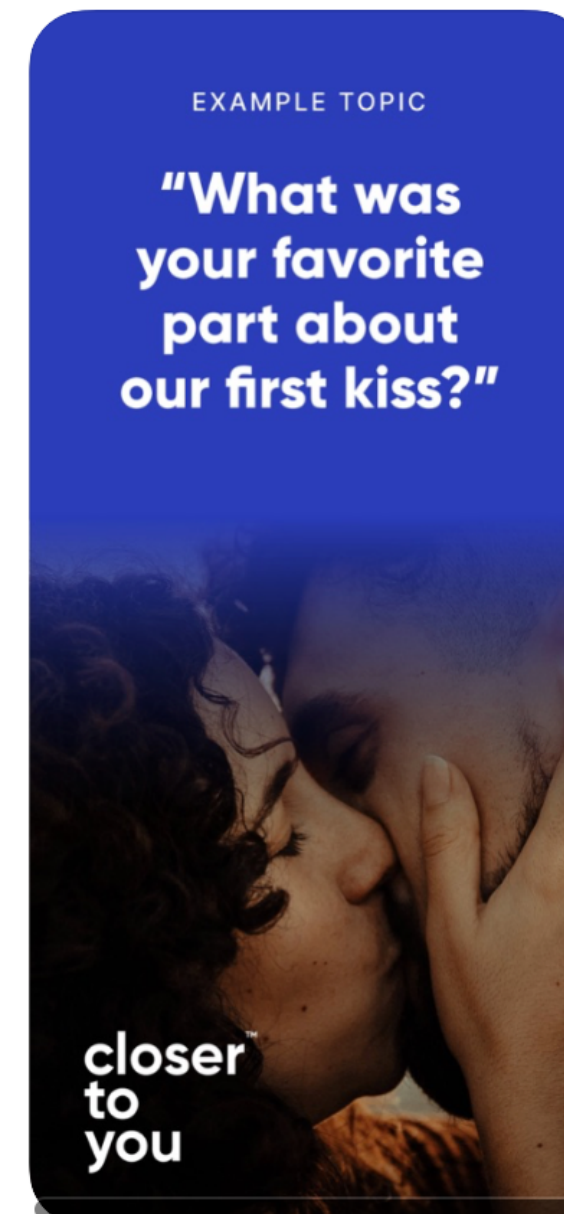
6000+ conversation topics

NOT PARTNER

0:17

TOPIC

What is the greatest evil in the world?

X

NEXT

asya

Real-time feedback conversational analytics

Brevity

My avg	Partner's avg	Aim
0:38	0:40	0:30

● Me ● Partner

Pace (wpm)

My avg	Partner's avg	Aim
135.92	124.4	120

● Me ● Partner

FINISH

RESUME

B2C APP USER INTERFACE

Emotional intelligence

Total Moments
Positive / Negative
14 / 7

Dominant **13.3%**

Tense **6.7%**   Passionate **20%**

Cheerful **26.7%**   Happy **13.3%**

Interested **20%**

Interested **16.7%**

Relaxed **33.3%**

Sad **16.7%**

Playful **33.3%**
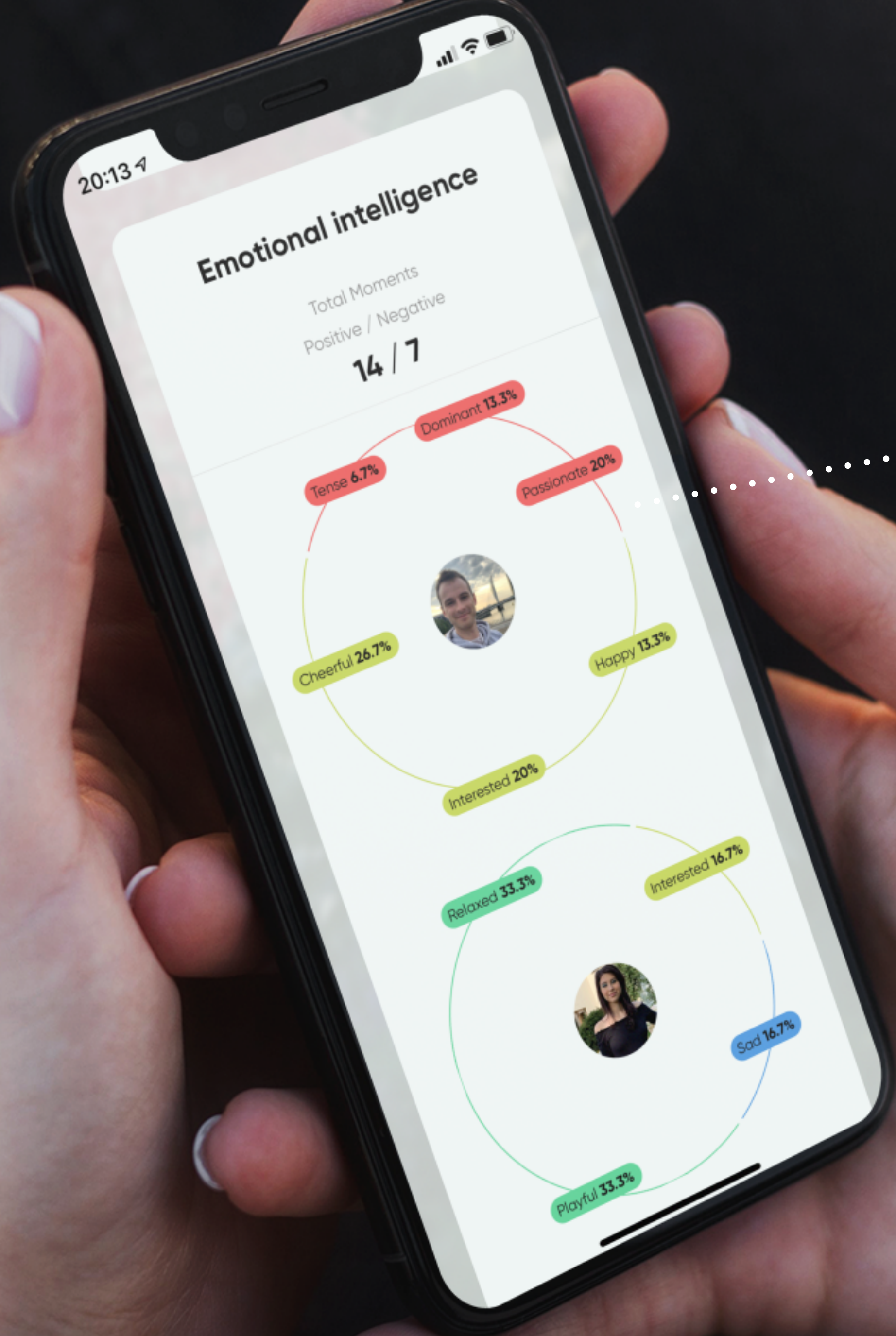
Real-time feedback on emotional intelligence

B2C APP USER INTERFACE

Forbes

"The disruption potential for Asya app could be immense. In many countries, psychological services are either difficult to find, cost prohibitive or both."

Featured as
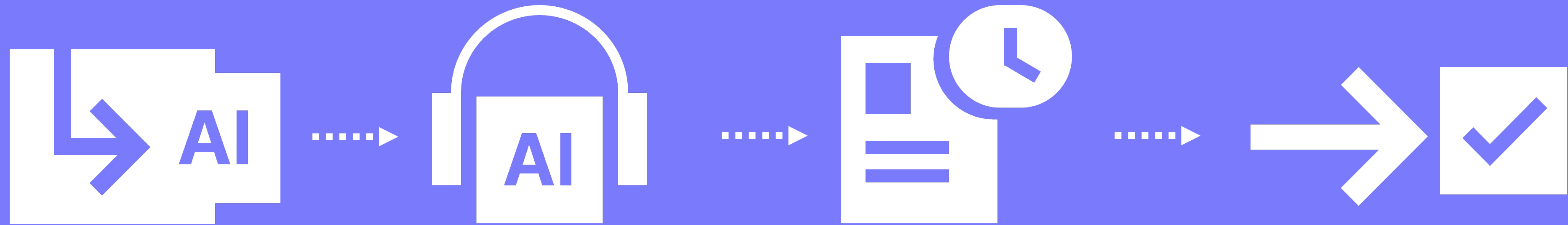App of the Day
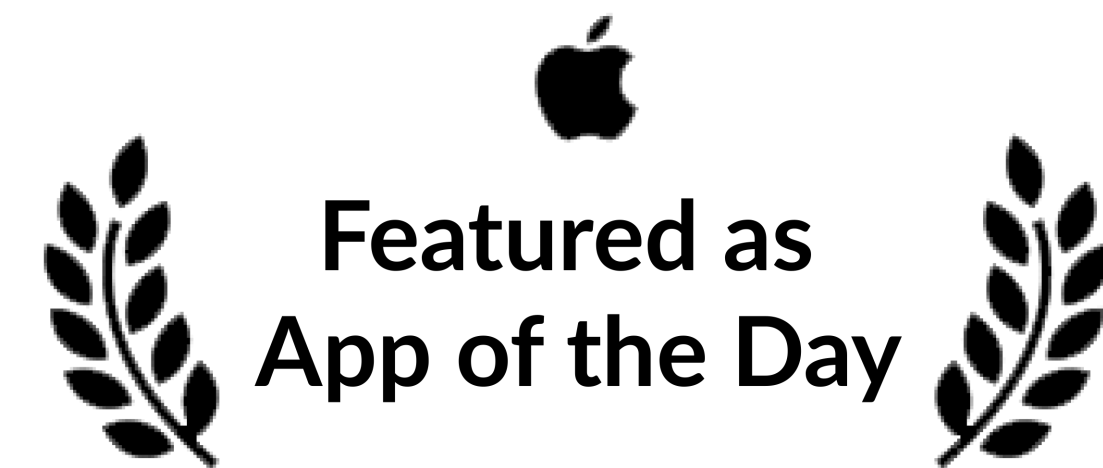
Pitch
Patterns

Increase sales using conversational intelligence

Manual process

Call Made → **Stored** → **Manager manually finds calls, listen, coach agents, improve strategy** → **Unclear process, questionable outcome**

Automated process

AI automatically analyses calls in minutes.

AI provides feedback of actionable problems and oppurtunities

**Save time and energy.
Clear process.**

Increased sales KPIs.

Conversational dynamics

Performance

Check the performance of the whole sales team at one glance.
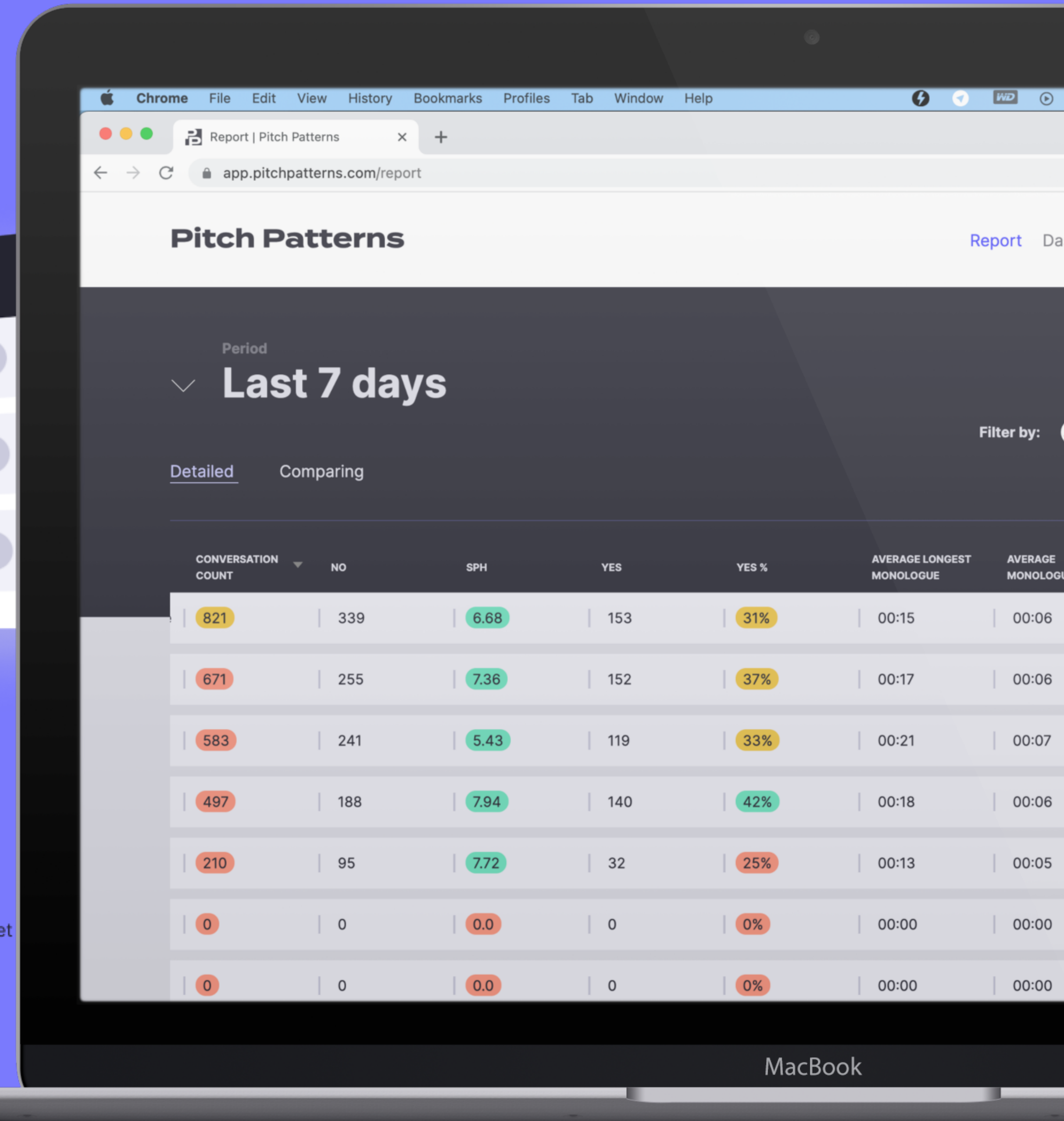
Metrics

Check different type of key conversational metrics to find out what drives sales.

Indicators

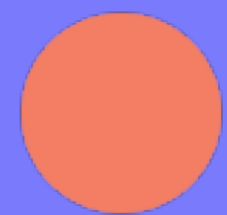Track conversational metrics set against your desired goals.

Conversation contents

Markers

See issues automatically marked. Save time by knowing where to focus attention first.

Meta analysis

See which emotional moments happened at what exact time moments.
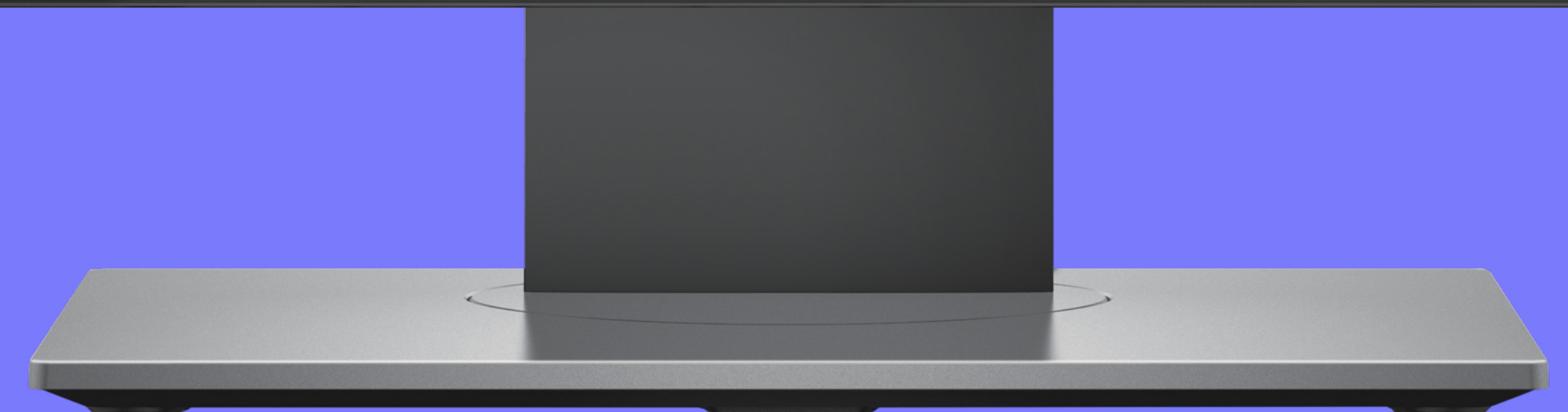
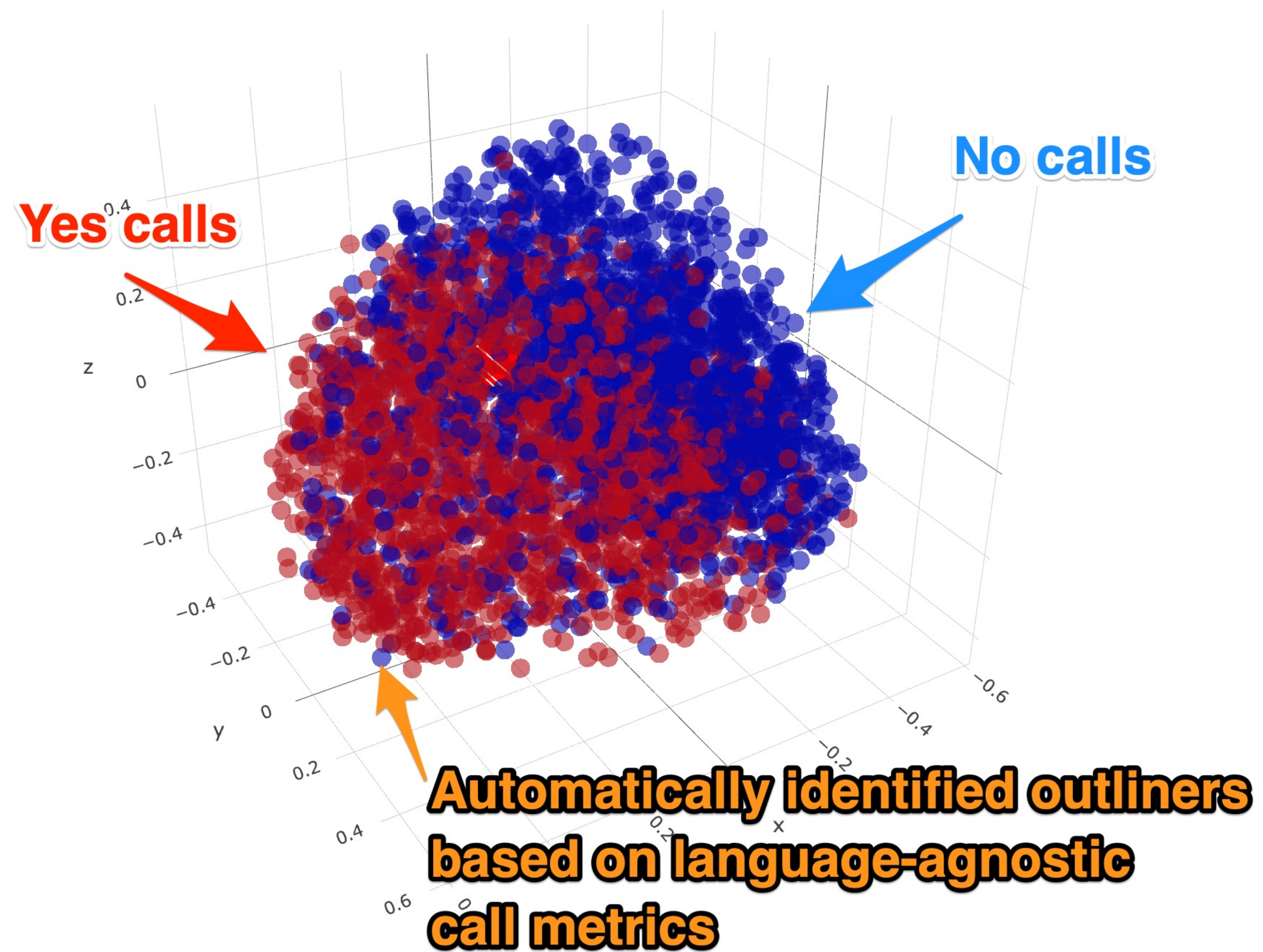# Instead of listening 1000 calls we automatically select top 10 which you should review

Yes calls

No calls

Automatically identified outliners based on language-agnostic call metrics

* Each data point is a single call

Flag suspicious calls automatically

Helper   Worktable   Report   Team overview   Conversations   Library

Period
∨ **Today**

Agent
Laura Ziediņa-Ozoliņa

Project

12
CONVERSIONS COUNT

15

10

5

0

0   1h   2h   3h   4h

8
SALES
Goal 20

68%
YES

59%
TALKING RATIO

03:58
AVERAGE LONGEST
MONOLOGUE

Excellent
ENERGY

Edit

Manager Feedback

Laba saruna, bet japagaida kamer atbild
klients. Ka veidojam pauzes?

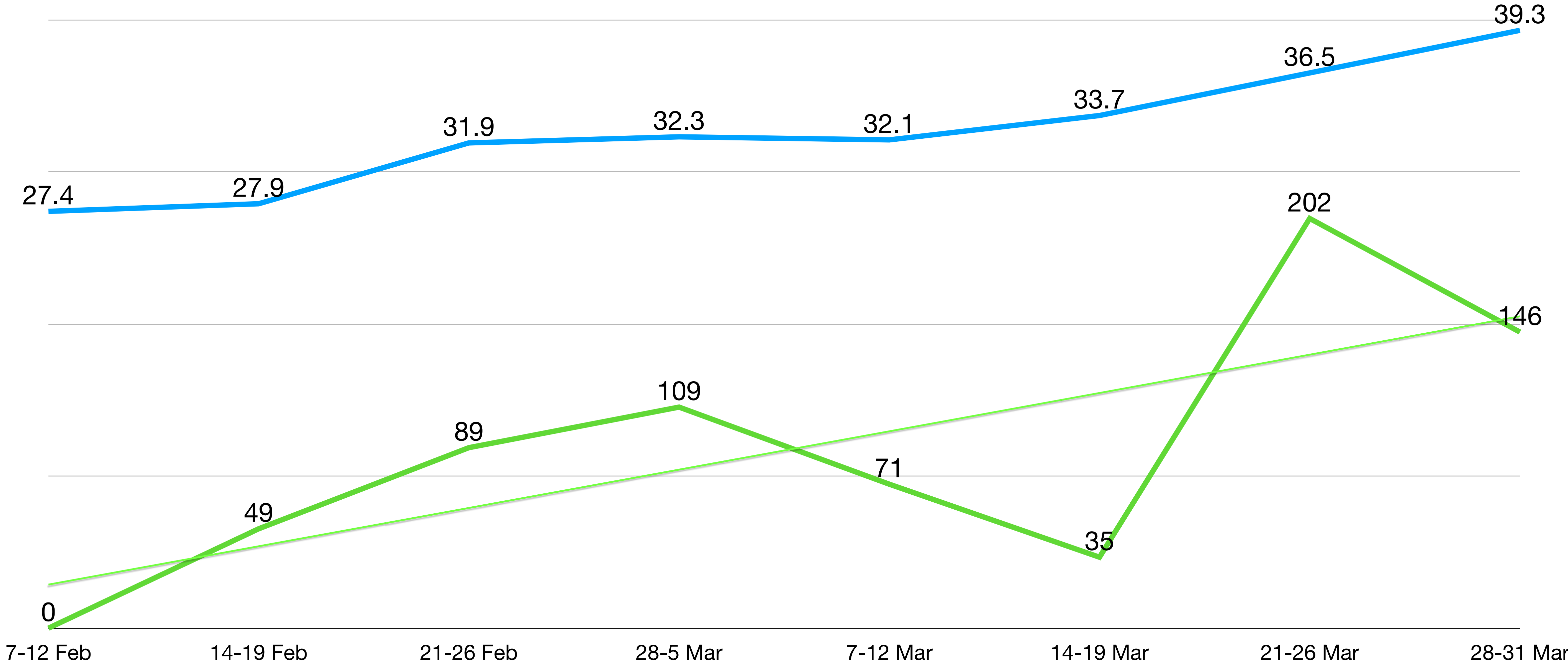New Feedback   Jānis Ozols, ID23222   Open conversation

Flagged Call

**This call might be important
for learning. Please check it out**

New Feedback   Skynet, ID23224   Open conversation

28

43% improvement in closed sales

Yes %: 27.4, 27.9, 31.9, 32.3, 32.1, 33.7, 36.5, 39.3

Session Count in PitchPatterns: 0, 49, 89, 109, 71, 35, 202, 146

7-12 Feb | 14-19 Feb | 21-26 Feb | 28-5 Mar | 7-12 Mar | 14-19 Mar | 21-26 Mar | 28-31 Mar

— Yes %   — Session Count in PitchPatterns

29

User stories

Pitch Patterns

POSITIVE CALLS

pitchpatterns.com