

Nome ANDRÉ RAFAEL
Instituição IADT - DÚN LAOGHAIRE
Título MASTER OF SCIENCE IN USER EXPERIENCE DESIGN

Aprendi no Mestrado em UX Design

- UX Design
- Empatizar
- Definir
- Idealizar
- Prototipar
- Testar

Sauce Recipe

- 4g Black Pepper
- 23g Parmesan
- 1 Whole Egg
- 1 Egg Yolk

Ingredients

Sauce

00:53

Pasta

Mix Everything

01:14 / 03:26

20 Heurísticas

Atalhos / Boas práticas

80 Pesquisa

Comportamento do Usuário

Empatizar

Explorar

- Pesquisas
- Mercado
- Usuários

Para 92% dos internautas, o consumo de vídeo é uma das principais atividades.

(We Are Social, 2019)

Vídeos menores e segmentados melhoram a capacidade de aprendizado do conteúdo.

(Clark & Mayer, 2012)

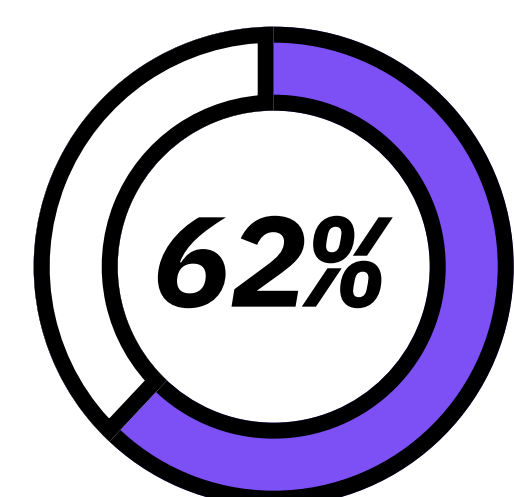
The Google Scholar logo is displayed on a light gray rectangular background. The word "Google" is in its characteristic multi-colored font (blue, red, yellow, blue, green, red), and the word "Scholar" is in a plain, dark gray sans-serif font.

MERCADO

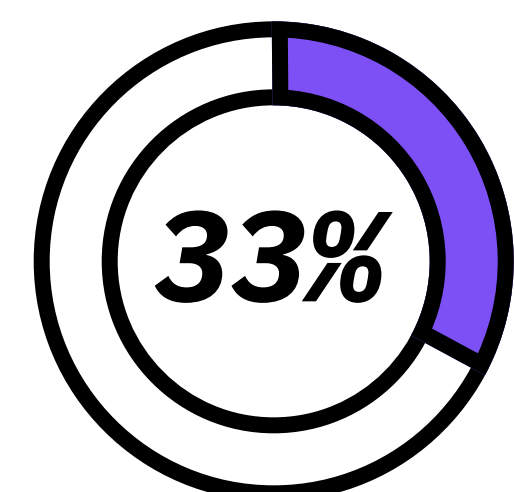
	 YouTube	 Udemy	 coursera	 egghead.io	 LinkedIn	 treehouse
Speed Control	●	●	●	●	●	●
Quality Control	●	●	●	●	●	
Timeline Preview	●	●				
Subtitles	●	●	●	●	●	●
Annotations		●	●			
Timestamps	●	●				
Bookmark Area		●				
Rewind / Forward	●	●		●	●	●
Lesson Code				●		
Miniplayer	●				●	
Autoplay	●	●	●	●	●	●
Transcripts	●	●	●	●	●	●

Prints + Tabelas

Quantitativa



Buscam por timestamps



Possuem dificuldades para achar informações dentro de vídeos

Qualitativa

Seções nos Vídeos (52)

Busca no Vídeo(22)

Questionários

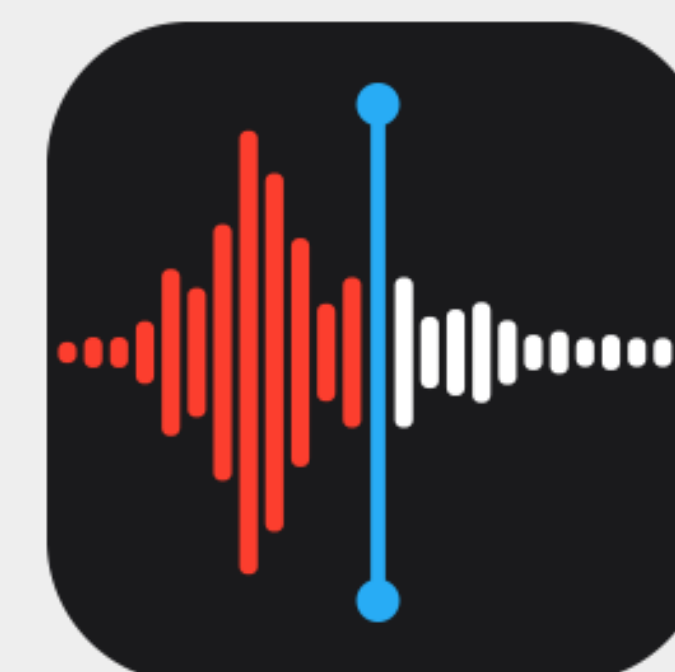
Entrevistas

Observação de uso



Google Forms

hotjar





Victor Paulo

30 years, postgraduate

"I want to get the next lead role at the company."

Background

Age

30

Status

Married

Education

Postgraduate

Location

Berlin

Income

80k

Goals/Motivations

- Wants to learn the new version of the library React.

- Wants to contribute with better code for his team.

- Wants to get a lead role in the next company project.

Skills

usage

infrequent

frequent

skill level

novice

expert

professional

un-experienced

experienced

Likes/Dislikes

likes

Travel

Program

Photography

Art

dislikes

Wasting time

Videos that do not go to the point

Crowd places

Pains

Will I have enough money to buy a better house for my kids, when I have them?

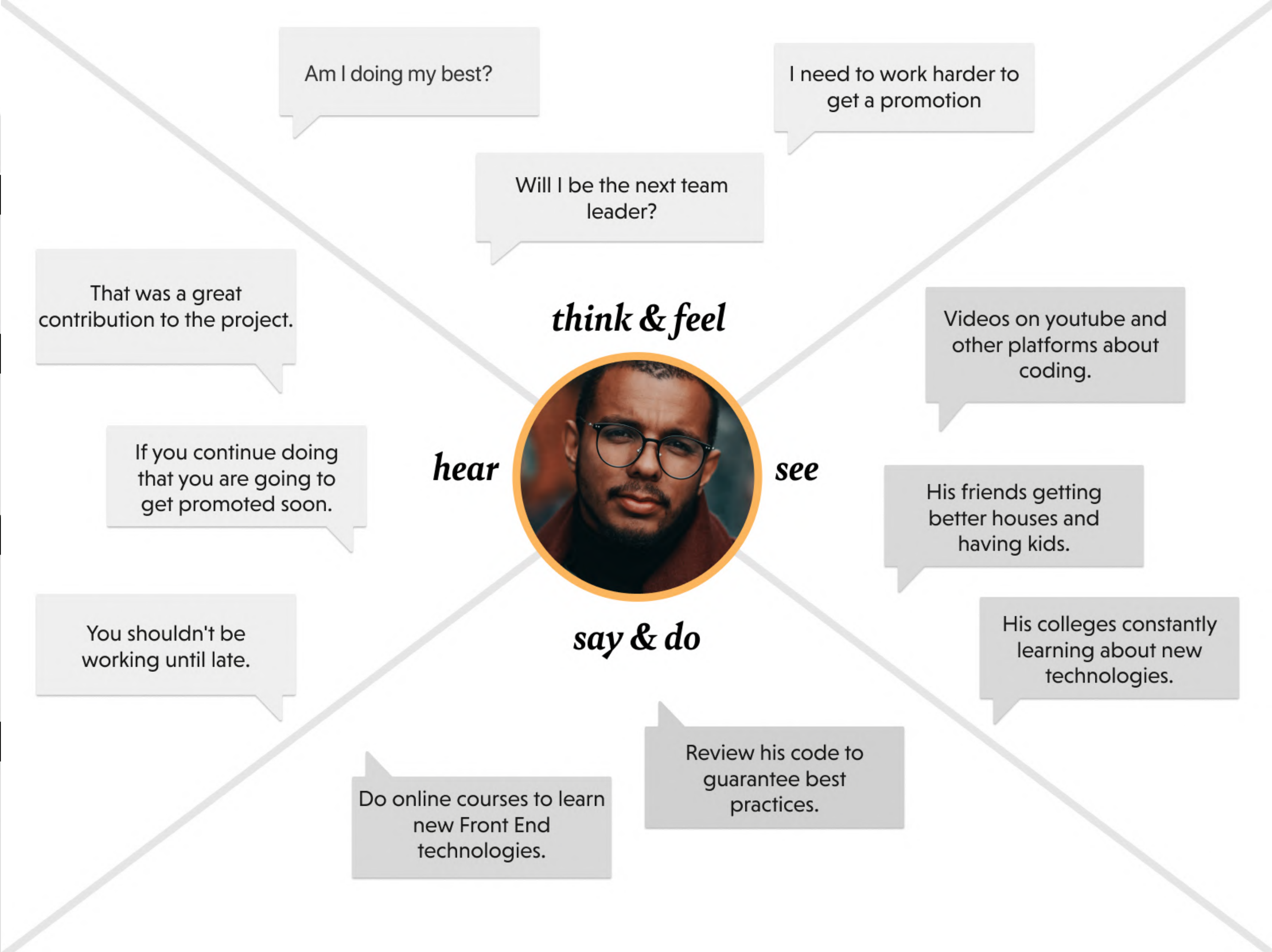
Am I contributing enough to the project?

Gains

Improving his ability to code.

Getting good feedback from his manager.

*Photo by Marcos Paulo Prado on Unsplash



The Empathy Map is a circular diagram with a central portrait of Victor Paulo. It is divided into four quadrants by two intersecting diagonal lines. The quadrants are labeled: 'think & feel' (top), 'see' (right), 'say & do' (bottom), and 'hear' (left). Each quadrant contains several thought bubbles representing the user's perspective.

- think & feel:**
 - Am I doing my best?
 - Will I be the next team leader?
 - I need to work harder to get a promotion
- see:**
 - Videos on youtube and other platforms about coding.
 - His friends getting better houses and having kids.
 - His colleges constantly learning about new technologies.
- say & do:**
 - Review his code to guarantee best practices.
 - Do online courses to learn new Front End technologies.
- hear:**
 - That was a great contribution to the project.
 - If you continue doing that you are going to get promoted soon.
 - You shouldn't be working until late.

Personas

Mapa de Empatia

Cenários

Storyboard

Jornada do Usuário

As is - Inside Video Search

	Search	Watching the Video	Coding	Finish
DOING	Search on Google for XMLHttpRequest Find a video on how to use it	Watching the video while the instructor talks about the history of XMLHttpRequest Uses the timeline bar to try to find when the coding starts Finds the beginning of the code	Pauses the video when there is enough code on the screen Starts writing the code to test how it works Repeat the last two steps, three more times	Saves the code and bookmarks the video for later, in case he needs to remember
THINKING	I want to learn how to use XMLHttpRequest Good, but the video is 15 minutes long	When this guy is going to stop talking about history and teach me how to use it I can't find it, when does he starts coding I finally found it	That's enough let's check how it works I wish I could copy that code I thought that would be faster	Finally I know how to use it, but it took me 30 minutes for that
FEELING	Confident Curious	Annoyed Frustrated Relief	Annoyed	Happy that he learned, but wish it was faster

Definir

Como podemos melhorar a busca de informações dentro de um vídeo?

Será que o uso de timestamps, para segmentar um vídeo, torna a busca de informações mais efetiva?

Idealizar

IDEALIZAR

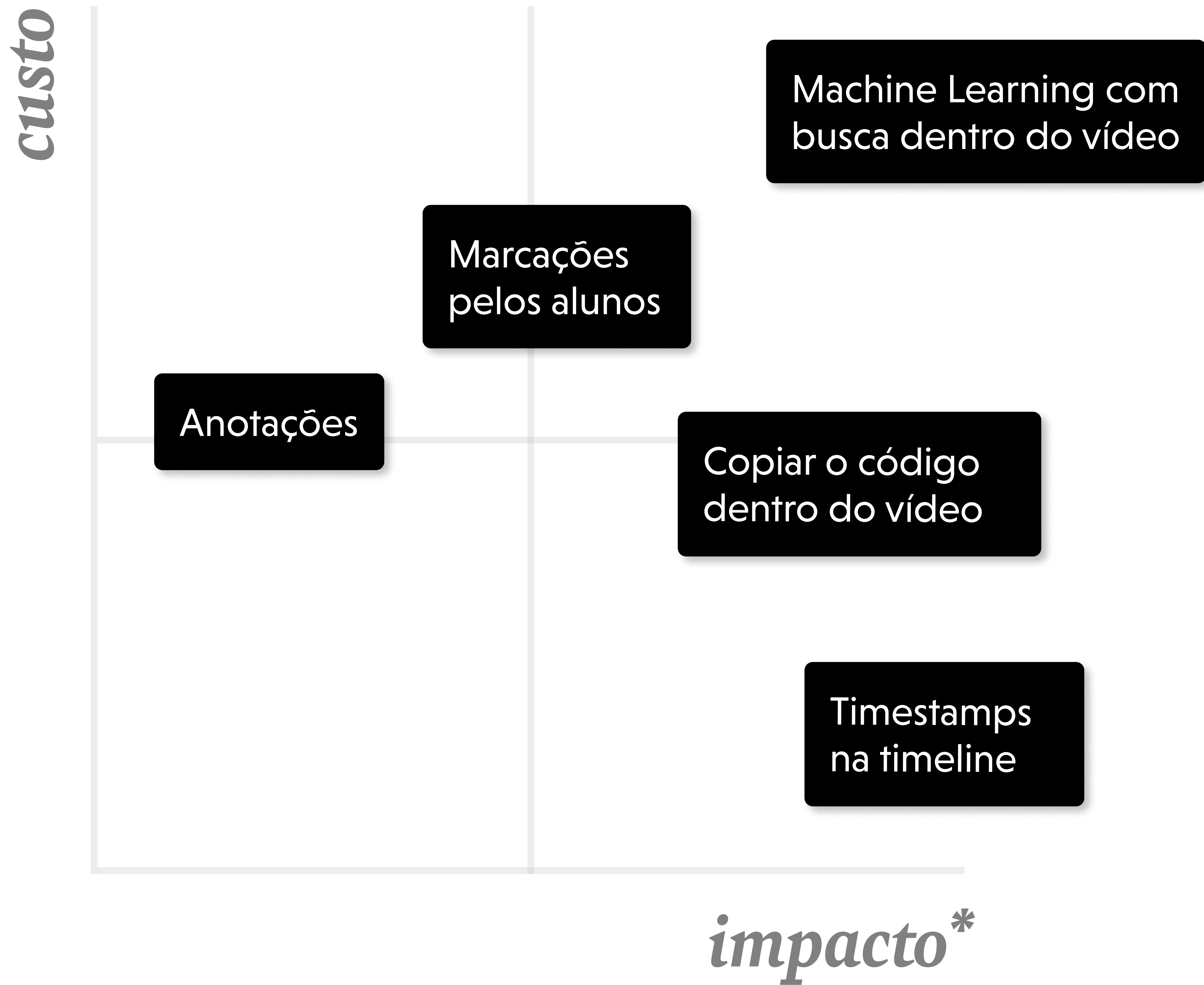
To be - Inside Video Search

	Search		Watching the Video		Coding			Finish
DOING	Search on the Web for XMLHttpRequest	Find a video on how to use it	See marked points inside the video timeline	Clicks on the mark that indicates where the coding begins	See sections of the code appearing on the screen	Clicks on the code to copy and paste on the coding editor	Repeat the last two steps, three more times	Saves the code and bookmarks the video for later, in case he needs to remember
THINKING	I want to learn how to use XMLHttpRequest	Good, but the video is 15 minutes long	Good I can go straight to where I want	That's so useful	I never saw that before	I wish every video had that feature	That's going to be faster than I thought	I know how to use it, and it only took 10 minutes
FEELING	Confident	Curious	Happy	Very Happy		Very Happy		Very happy with the video interface

Brainstorming

Matriz de Prioridades

Cenário Ideal



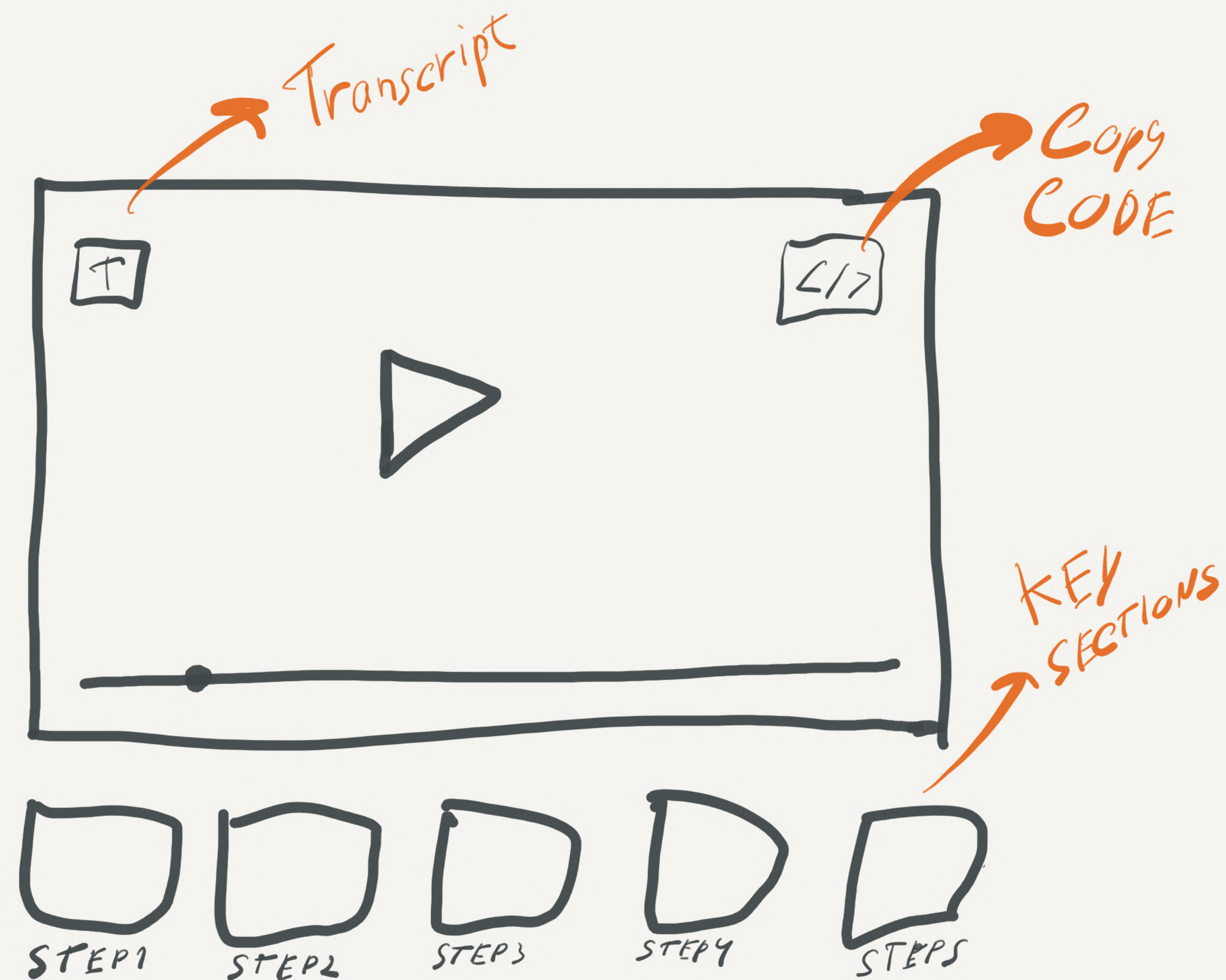
Prototipar



Protótipos

- **Papel e Caneta**
- **Wireframe**
- **Alta Fidelidade**

PAPEL E CANETA

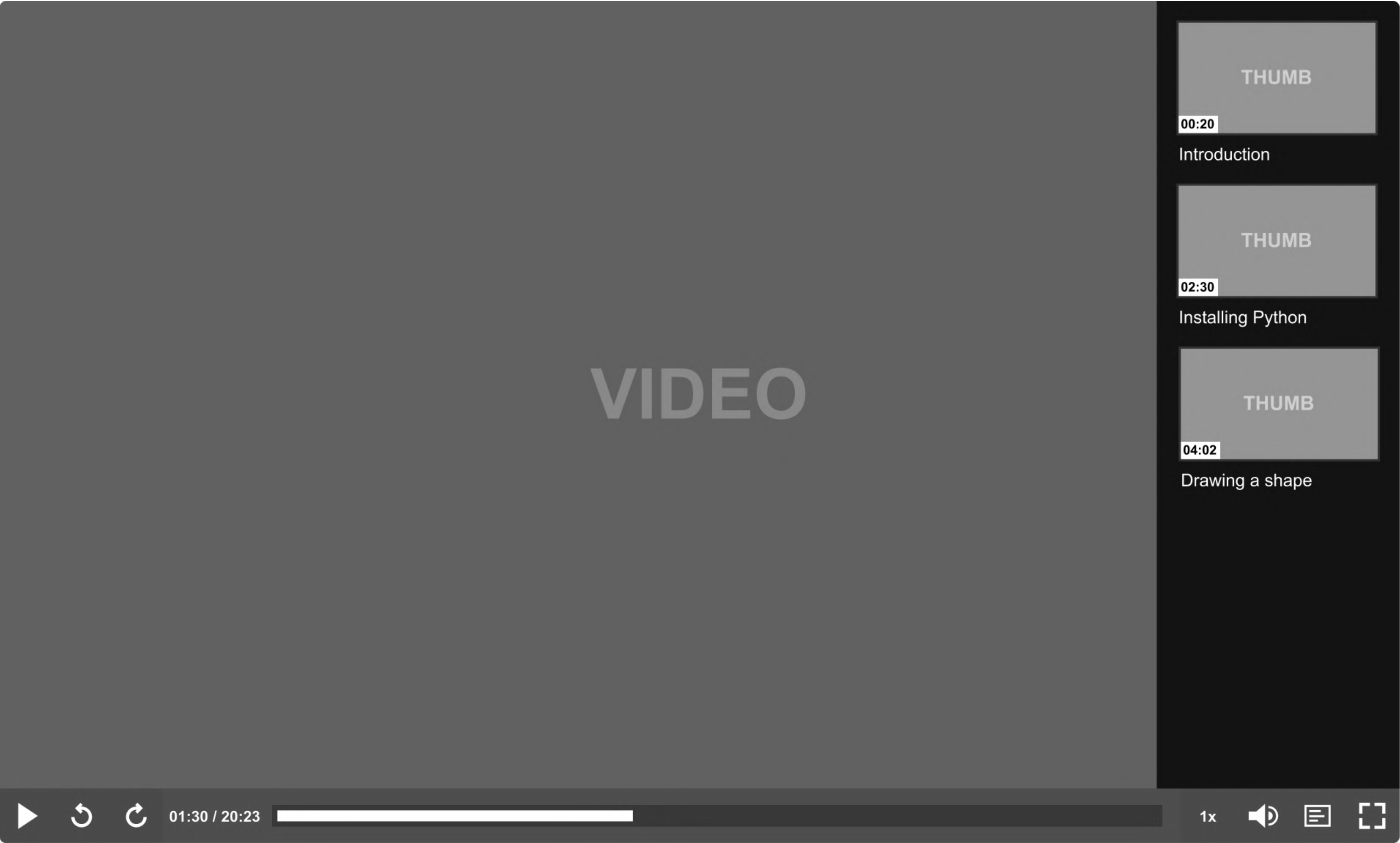


Baixo custo

Não se apega

Rápido

WIREFRAME



Interativo

Explorar Soluções

Funcionalidades



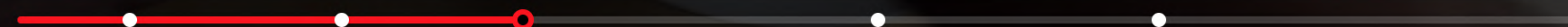
23g *Parmesan*

 COPY RECIPE



Sauce

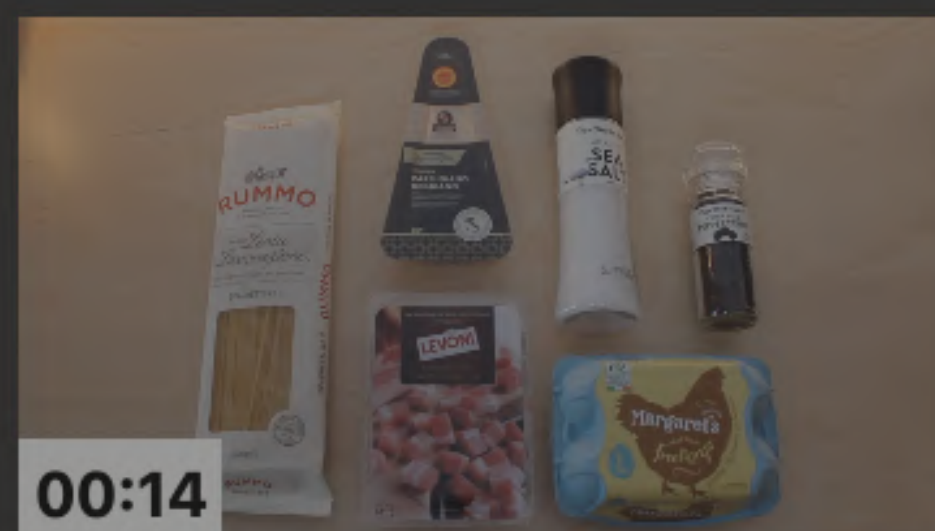
01:08



01:06 / 03:26

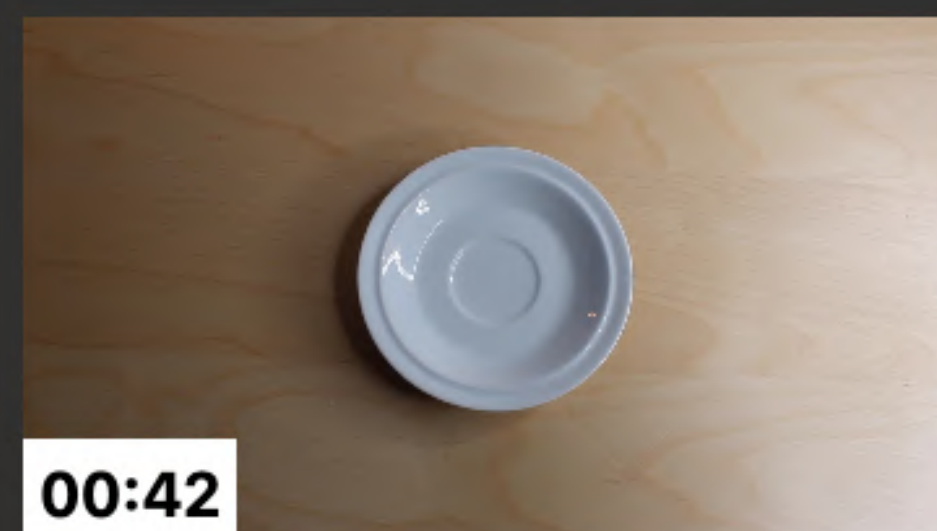


1x



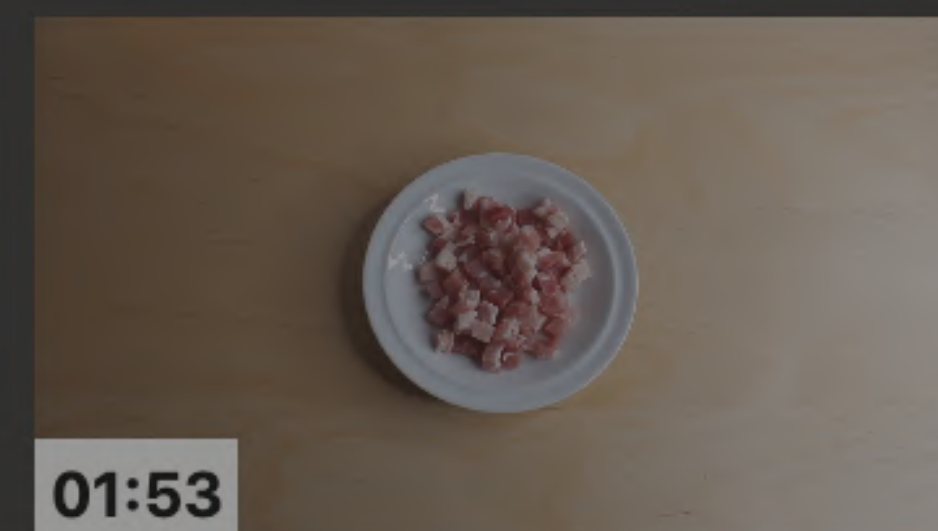
00:14

Ingredients



00:42

Sauce



01:53

Pasta



02:30

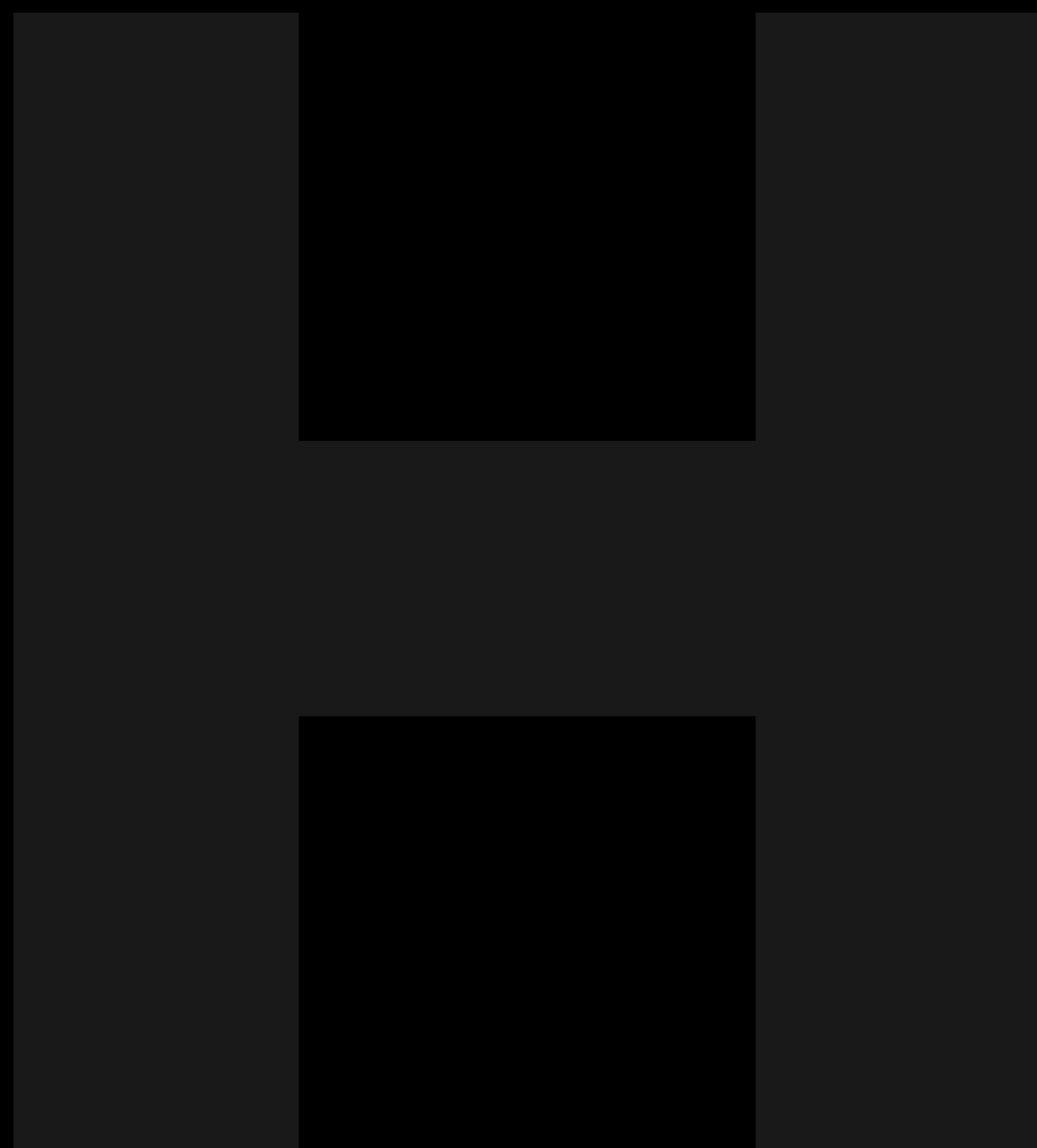
Mix Everything

Testar

Testar

- Roteiro / Processo
- Coleta de Dados
- Análise de Dados

- O que será testado?
- Como será testado?
- Quais os dados serão coletados?
- Qual a ferramenta de coleta?
- É teste a/b? Quantas variações?
- Será utilizada alguma escala de avaliação?

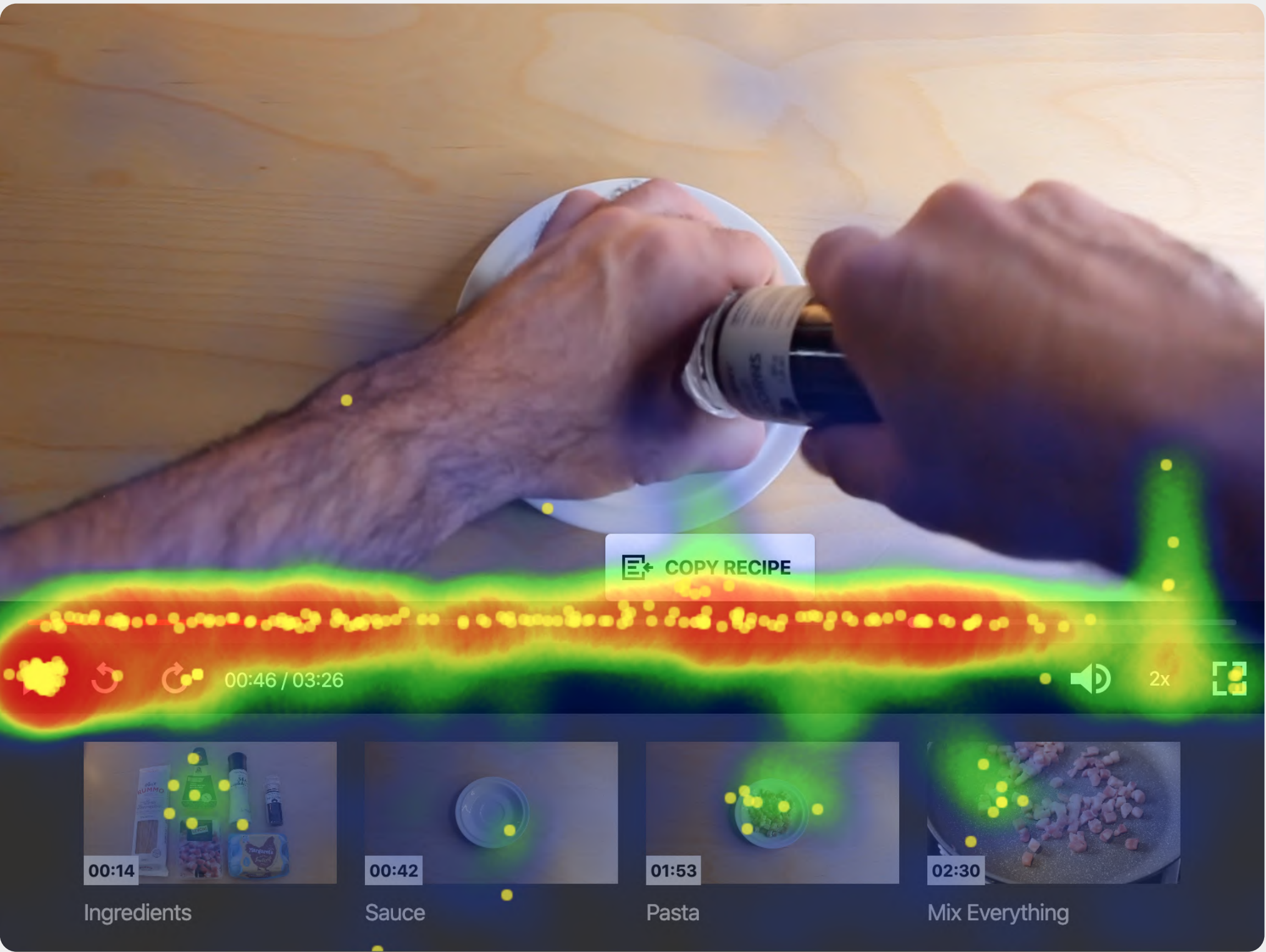


- 1 Os usuários **concluem as tarefas de codificação com mais rapidez** ao usar uma interface de vídeo interativa.
- 2 Interfaces de vídeo interativas **facilitam a localização de conteúdo** dentro do vídeo.
- 3 Interfaces de vídeo interativas **melhoram a satisfação geral do usuário** em tutoriais de codificação.

Tempo na Tarefa

Write down the function used to deal with errors. (Ex: function functionName () { const ... })

Mapa de Calor



System Usability Scale (SUS)

Post-test Questionnaire

I think that I would like to use this video player frequently.

- ☐ Strongly Disagree
- ☐ Disagree
- ☐ Neutral
- ☐ Agree
- ☐ Strongly Agree

I found the video player unnecessarily complex.

- ☐ Strongly Disagree
- ☐ Disagree
- ☐ Neutral

- **Instruções**
- **Termos de Consentimento**
- **Questionário Pré-teste**
- **Vídeo**
- **Questões do vídeo**
- **Questionário Pós-teste**

Welcome to my UX Research 🙌

My name is André Pais, and I am a MSc student at IADT. To help my reasearch you are going to need:

🧘

A distraction free environment

💻

A laptop or desktop

🕒

The next 20 minutes free

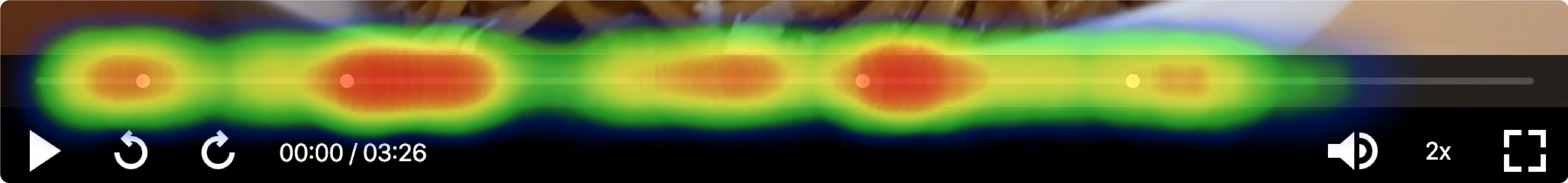
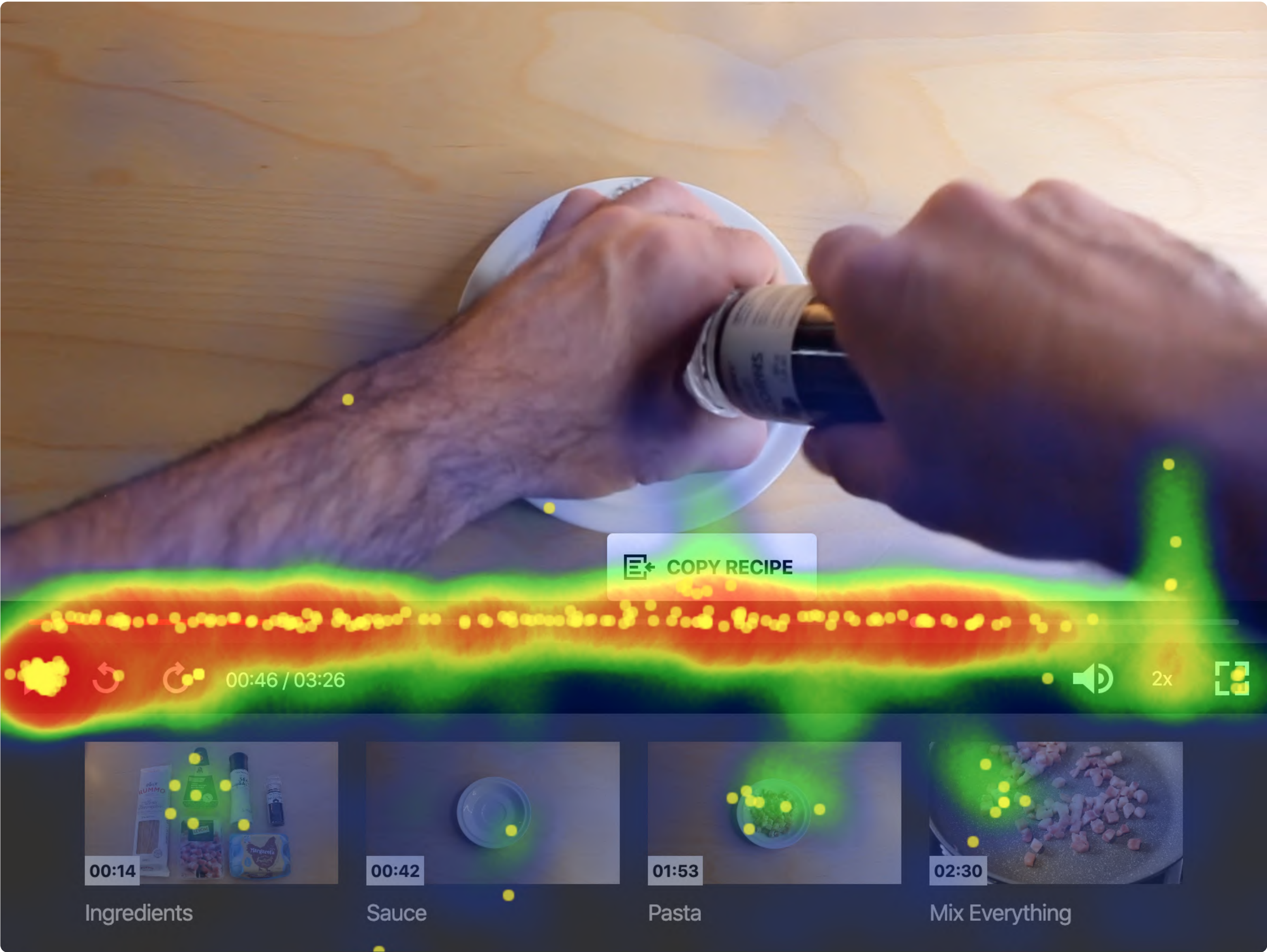
💡

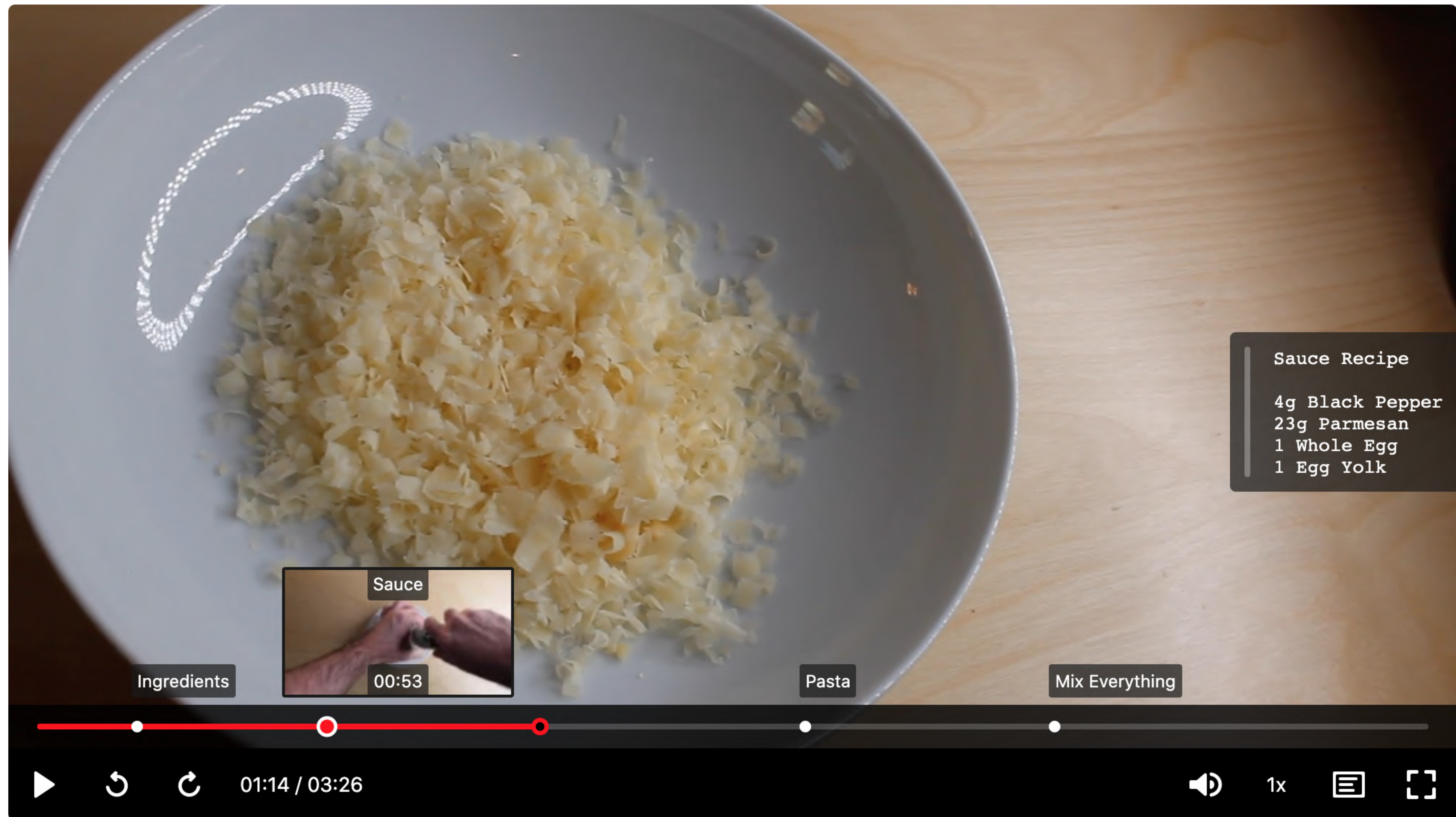
Basic JavaScript knowledge

Yes I can do it!



TESTE
INICIAL





Tempo na tarefa

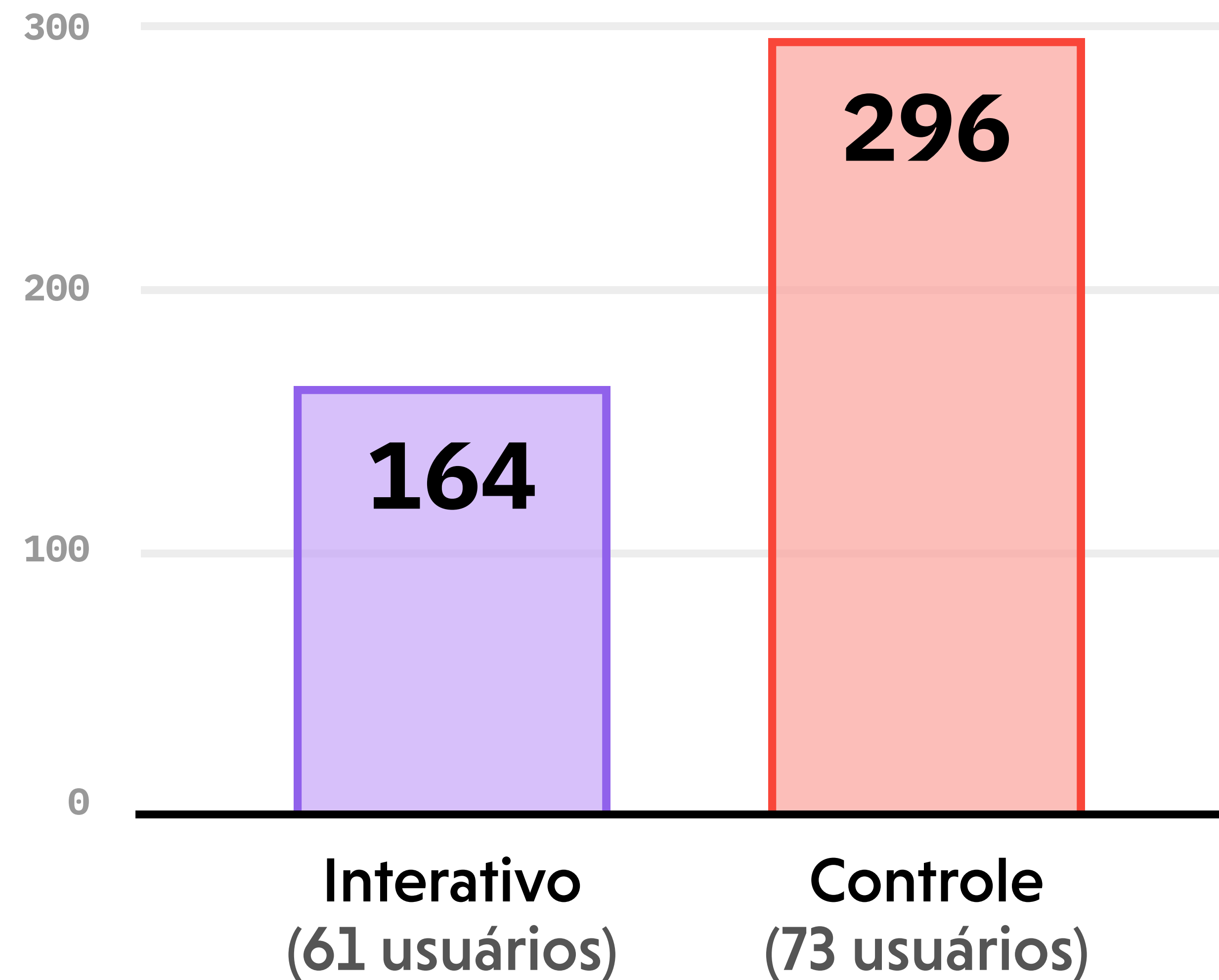
Two-tailed test of
significance (segundos)

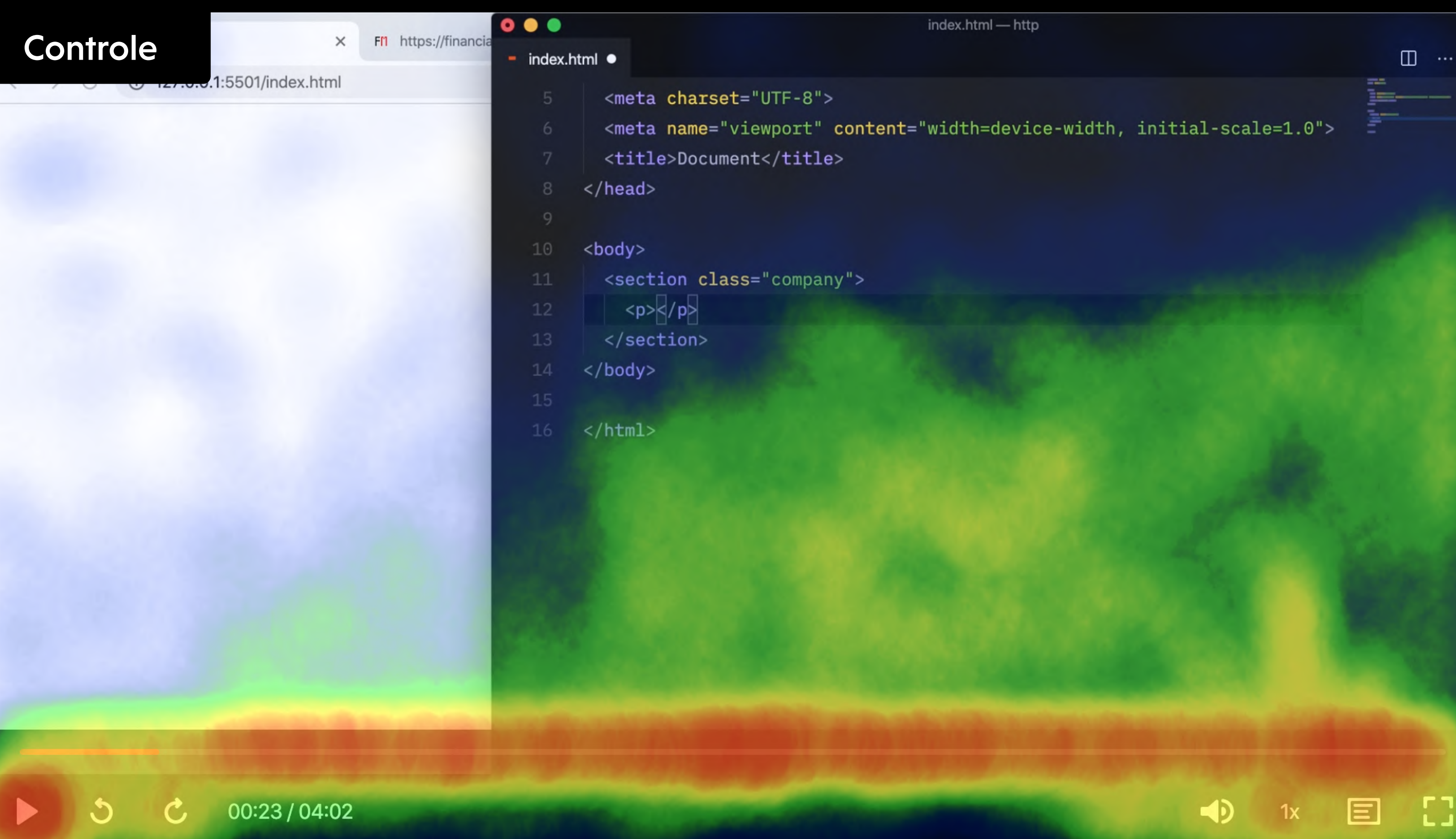
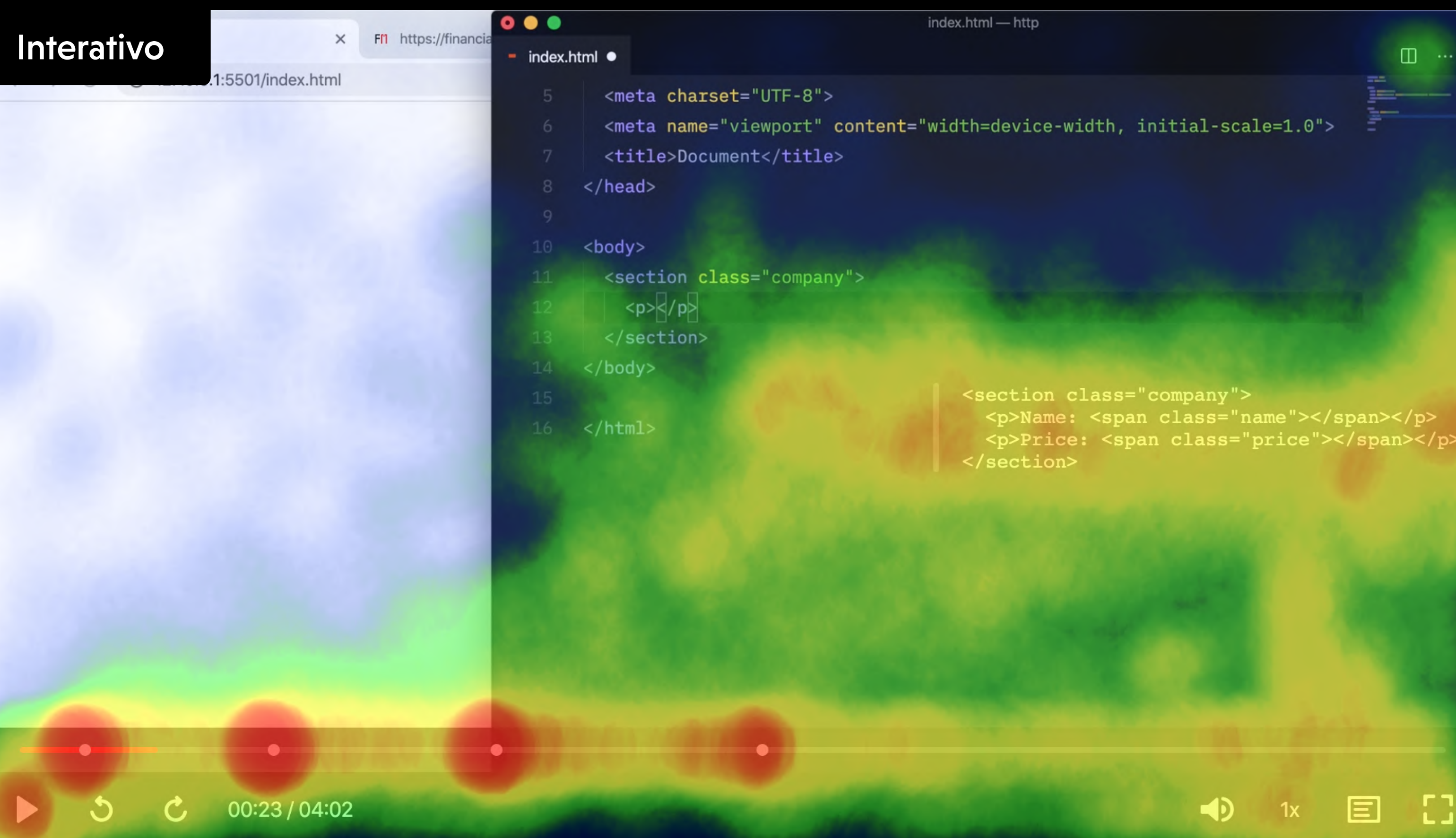
P-VALUE < 0.001

H1 Os usuários concluem
as tarefas de codificação
com mais rapidez ao usar
uma interface de vídeo
interativa.

(hipótese nula rejeitada)

Média em Segundos



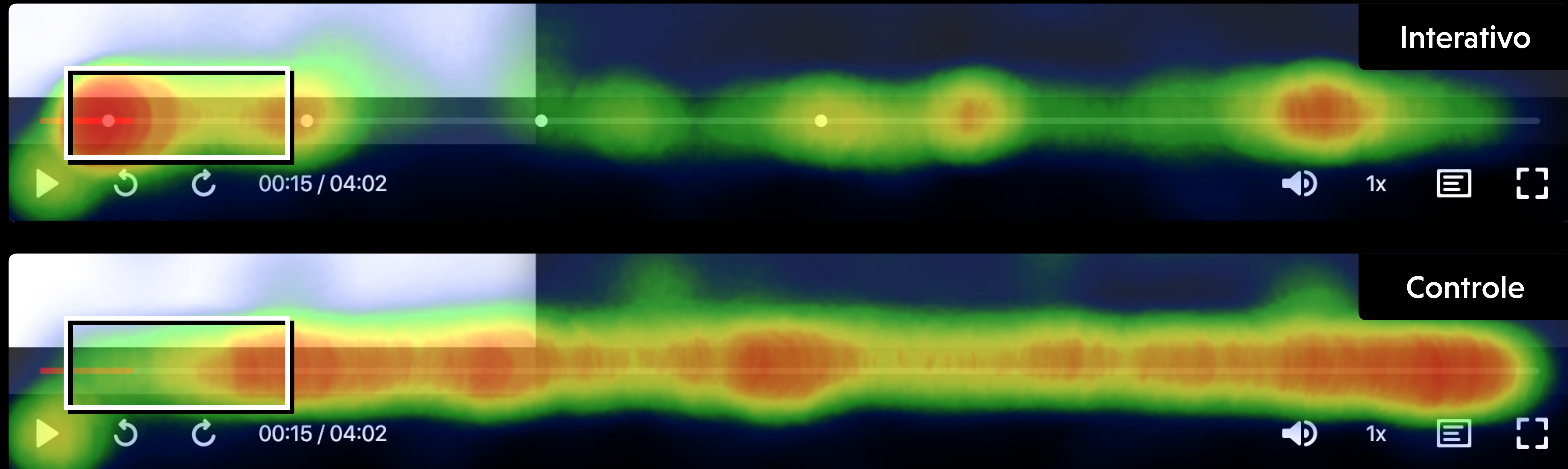


Localização

Interfaces de vídeo interativas facilitam a localização de conteúdo dentro do vídeo.

(hipótese nula rejeitada)

61221 interações



Atividade quando os usuários estavam respondendo à terceira pergunta.
O retângulo branco marca onde a resposta pode ser encontrada.

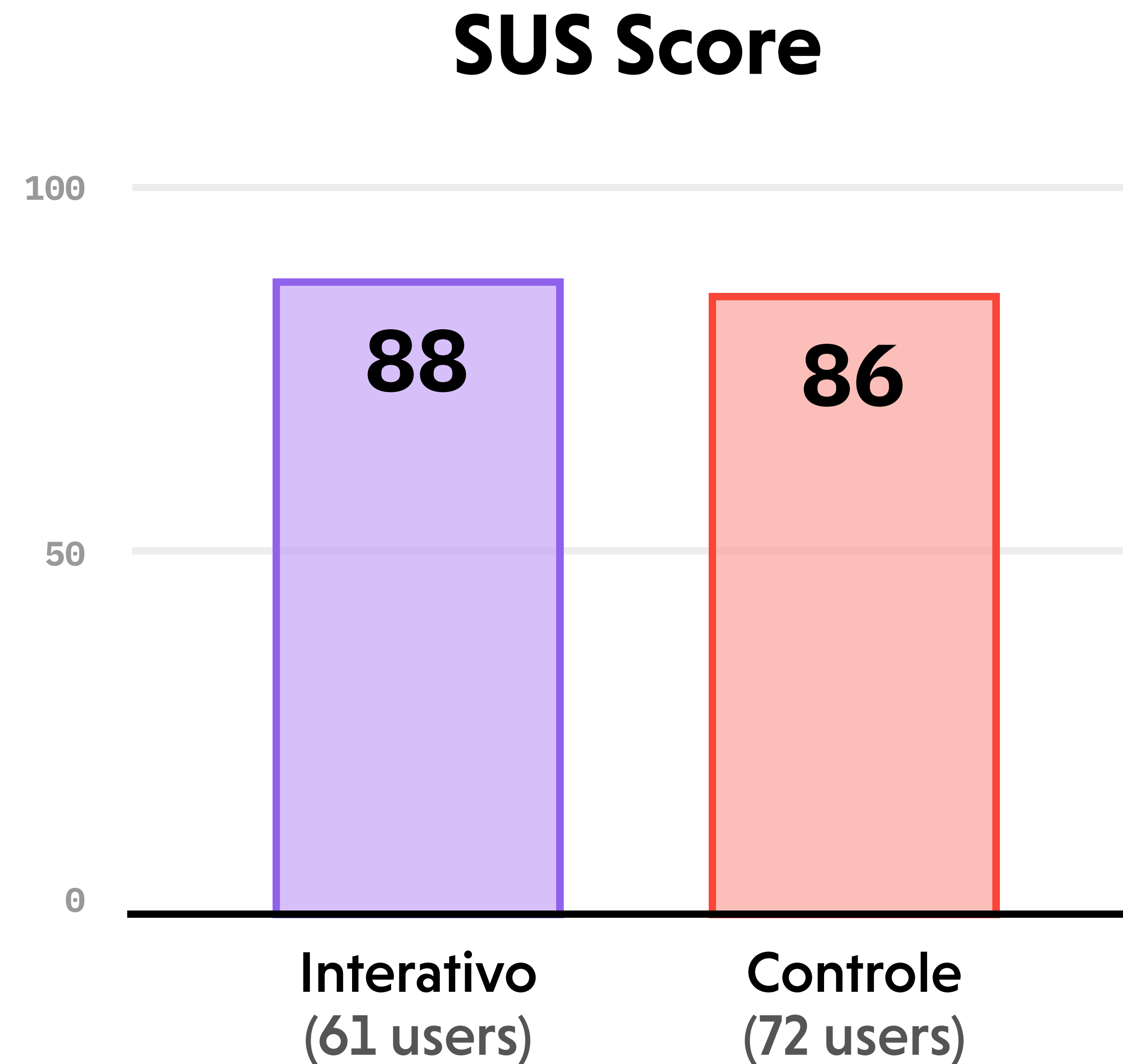
Satisfação

Two-tailed test of
significance (SUS Score)

P-VALUE = 0.253

Interfaces de vídeo
interativas melhoram a
satisfação geral do usuário
em tutoriais de codificação.

(falha em rejeitar a
hipótese nula)



A Score > 80

RESULTADOS

Repetir...

UX Design

Mestrado?

Adlin, T., & Pruitt, J. (2010). The essential persona lifecycle: Your guide to building and using personas. Amsterdam: Morgan Kaufmann.

Babich, N. (2018). The magic of paper prototyping. Retrieved November 5, 2019, from <https://uxplanet.org/the-magic-of-paper-prototyping-51693eac6bc3>

Bangor, A., Kortum, P., & Miller, J. (2009). Determining what individual SUS scores mean: Adding an adjective rating scale. *Journal of Usability Studies*, 4(3), 114–123.

Banker, R. D., & Morey, R. C. (1986). Use of categorical variables in data envelopment analysis. *Management Science*, 32(12), 1613–1627. <https://doi.org/10.1287/mnsc.32.12.1613>

Benkada, C., & Moccozet, L. (2017). Enriched interactive videos for teaching and learning. *Proceedings - 2017 21st International Conference Information Visualisation, IV 2017*, (November), 344–349. <https://doi.org/10.1109/IV.2017.74>

Biard, N., Cojean, S., & Jamet, E. (2018). Effects of segmentation and pacing on procedural learning by video. *Computers in Human Behavior*, 89, 411–417. <https://doi.org/10.1016/j.chb.2017.12.002>

Binder, M. (2018). The death of YouTube annotations marks an end for early interactive web video. Retrieved November 5, 2019, from <https://mashable.com/article/the-death-of-youtube-annotations/>

Brown, T., & Wyatt, J. (2010). Design thinking for social innovation. *Development Outreach*, 12(1), 29–43. https://doi.org/10.1596/1020-797X_12_1_29

Brown, W. J., & Meeks, J. D. (1997). Experimenting with the entertainment-education strategy in film and video. *Journal of Film and Video*, 49(4), 30–43. Retrieved from <http://www.jstor.org/stable/20688157>

Bucklin, R. E., & Sismeiro, C. (2009). Click here for internet insight: Advances in clickstream data analysis in marketing. *Journal of Interactive Marketing*, 23(1), 35–48. <https://doi.org/10.1016/j.intmar.2008.10.004>

Burr, S. (n.d.). The rise and fall of the VHS. Retrieved November 5, 2019, from <https://southtree.com/blogs/artifact/the-rise-and-fall-of-the-vhs>

Carmichael, M., Reid, A. K., & Karpicke, J. D. (2018). Assessing the impact of educational video on student engagement, critical thinking and learning: The current state of play [White paper]. Retrieved from <https://au.sagepub.com/en-gb/oce/press/what-impact-does-video-have-on-student-engagement>

Cennamo, K. S., Savenye, W. C., & Smith, P. L. (1990). Can interactive video overcome the “couch potato” syndrome? *Proceedings of Selected Paper Presentations at the Convention of the Association for Educational Communications and Technology*, 14. ERIC.

Clark, R. C., & Mayer, R. E. (2012). *E-learning and the science of instruction: Proven guidelines for consumers and designers of multimedia learning*. San Francisco, CA: Pfeiffer.

Creswell, J. W. (2012). *Educational research: Planning, conducting, and evaluating quantitative and qualitative research* (4th ed.). Boston, MA: Pearson.

Daoust, F., Hoschka, P., Patrikakis, C. Z., Cruz, R. S., Nunes, M. S., & Osborne, D. S. (2010). Towards video on the web with HTML5. *NEM Summit*, 6.

Dodson, S., Roll, I., Fong, M., Yoon, D., Harandi, N. M., & Fels, S. (2018). An active viewing framework for video-based learning. *Proceedings of the Fifth Annual ACM Conference on Learning at Scale*, 1–4. <https://doi.org/10.1145/3231644.3231682>

Hansch, A., Hillers, L., McConachie, K., Newman, C., Schildhauer, T., & Schmidt, P. (2015). Video and online learning: Critical reflections and findings from the field. *SSRN Electronic Journal*. <https://doi.org/10.2139/ssrn.2577882>

Jackson, B. (2020, March 12). Moving to a system font stack in WordPress (how and why). Retrieved March 16, 2020, from <https://woorkup.com/system-font/>

Jobs, S. (2010). Thoughts on flash. Retrieved November 5, 2019, from <https://www.apple.com/hotnews/thoughts-on-flash/>

Johnson, R. B., & Onwuegbuzie, A. J. (2004). Mixed methods research: A research paradigm whose time has come. *Educational Researcher*, 33(7), 14–26. <https://doi.org/10.3102/0013189X033007014>

Kay, R., & Kletskin, I. (2012). Evaluating the use of problem-based video podcasts to teach mathematics in higher education. *Computers and Education*, 59(2), 619– 627. <https://doi.org/10.1016/j.compedu.2012.03.007>

Krug, S. (2014). *Don’t make me think, revisited: A common sense approach to web usability*. (3rd ed.). New Riders.

Lauricella, A. R., Barr, R., & Calvert, S. L. (2016). Toddler learning from video: Effect of matched pedagogical cues. *Infant Behavior and Development*, 45, 22–30. <https://doi.org/10.1016/j.infbeh.2016.08.001>

Liedtka, J. (2015). Perspective: Linking design thinking with innovation outcomes through cognitive dias reduction. *Journal of Product Innovation Management*, 32(6), 925–938. <https://doi.org/10.1111/jpim.12163>

Mahapatra, D., Mariappan, R., Rajan, V., Yadav, K., A., S., & Roy, S. (2018). VideoKen: Automatic video summarization and course curation to support learning. *Companion Proceedings of the The Web Conference*, 239–242. <https://doi.org/10.1145/3184558.3186988>

McCue, T. (2018). E learning climbing to \$325 billion by 2025 UF canvas absorb schoology Moodle. Retrieved November 5, 2019, from <https://www.forbes.com/sites/tjmccue/2018/07/31/e-learning-climbing-to-325-billion-by-2025-uf-canvas-absorb-schoology-moodle/#36f3e71b3b39>

Mestre, L. S. (2012). Student preference for tutorial design: A usability study. *Reference Services Review*, 40(2), 258–276. <https://doi.org/10.1108/00907321211228318>

Nelson, S. (2018). Compared to reading, how much does video improve learning outcomes? Retrieved November 5, 2019, from <https://mitili.mit.edu/news/compared-reading-how-much-does-video-improve-learning-outcomes>

Newberry, C. (2019). 33 Facebook stats that matter to marketers in 2020. Retrieved November 5, 2019, from <https://blog.hootsuite.com/facebook-statistics/>

Nexten. (2018). Software developers in Europe & the world 2018: A study on the attractiveness of top tech cities for software developers. Retrieved from https://www.tradeandinvest.lu/wp-content/uploads/sites/3/2018/05/nexten_software_developers_study_europe.pdf

Nielsen, J. (2012). How many test users in a usability study? Retrieved December 9, 2019, from <https://www.nngroup.com/articles/how-many-test-users/>

Norman, D. (2013). *The design of everyday things*. New York, NY: Basic Books.

Purnamasari, H. P. D., & Syifana, N. (2014). Clickable and interactive video system using HTML5. *International Conference on Information Networking*, 232–237. <https://doi.org/10.1109/ICOIN.2014.6799697>

Reel Designer. (2017). The 5 different types of video productions: Examples and differences. Retrieved November 5, 2019, from <https://www.reeldesigner.com/5-different-types-of-video-production/>

Robinson, S. (2017, March 9). Cloud video intelligence API demo. Retrieved March 11, 2020, from <https://www.youtube.com/watch?v=mDAoLO4G4CQ>

Ruxton, G. D., & Neuhäuser, M. (2010). When should we use one-tailed hypothesis testing? *Methods in Ecology and Evolution*, 1(2), 114–117. <https://doi.org/10.1111/j.2041-210x.2010.00014.x>

Sharp, J. H. (2018). Using Codecademy interactive lessons as an instructional supplement in a Python programming course. *Information Systems Education Journal*, 17(3), 20.

Sherer, P., & Shea, T. (2011). Using online video to support student learning and engagement. *College Teaching*, 59(2), 56–59. <https://doi.org/10.1080/87567555.2010.511313>

Stack Overflow. (2019). Stack Overflow developer survey. Retrieved March 10, 2020, from <https://insights.stackoverflow.com/survey/2019>

The Public Domain Review. (n.d.). Phenakistoscopes (1833). Retrieved November 5, 2019, from <https://publicdomainreview.org/collections/phenakistoscopes-1833/>

Vural, O. F. (2013). The impact of a question-embedded video-based learning tool on e-learning. *Educational Sciences: Theory & Practice*, 13(2), 1315–1323.

We Are Social. (2019). Digital 2019: Essential insights into how people around the world use the internet, mobile devices, social media, and e-commerce. Retrieved from <https://wearesocial.com/global-digital-report-2019>

Williams, R. (2014). *The non-designer’s design book* (4th ed.). San Francisco, CA: Peachpit Press.

Wright, K. B. (2017). Researching internet-based populations: Advantages and disadvantages of online survey research, online questionnaire authoring software packages, and web survey services. *Journal of Computer-Mediated Communication*, 10(3). <https://doi.org/10.1111/j.1083-6101.2005.tb00259.x>

Zhang, D., Zhou, L., Briggs, R. O., & Nunamaker, J. F. (2006). Instructional video in e-learning: Assessing the impact of interactive video on learning effectiveness. *Information and Management*, 43(1), 15–27. <https://doi.org/10.1016/j.im.2005.01.004>