



React Performance

Practical optimizations

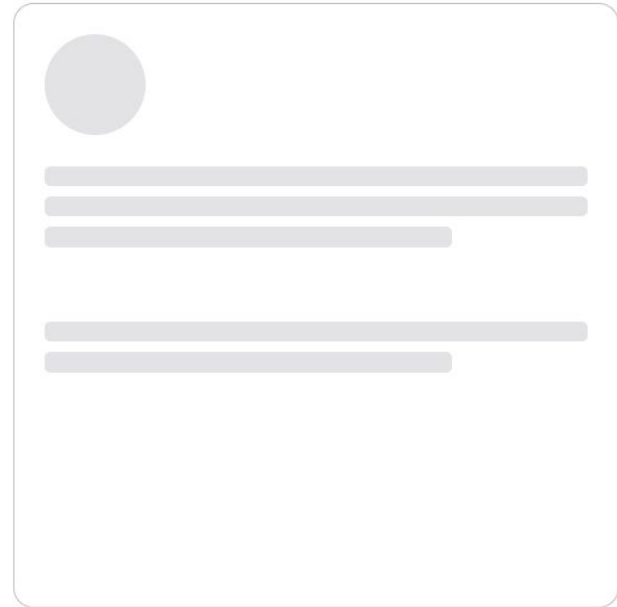
by Palo Otčenáš

Agenda

- Why React performance matters...
- Demo React app
-  Live coding with React Profiler
- 

 Optimizing perf
- We will be **saving lives** today! ...*wait for it...*

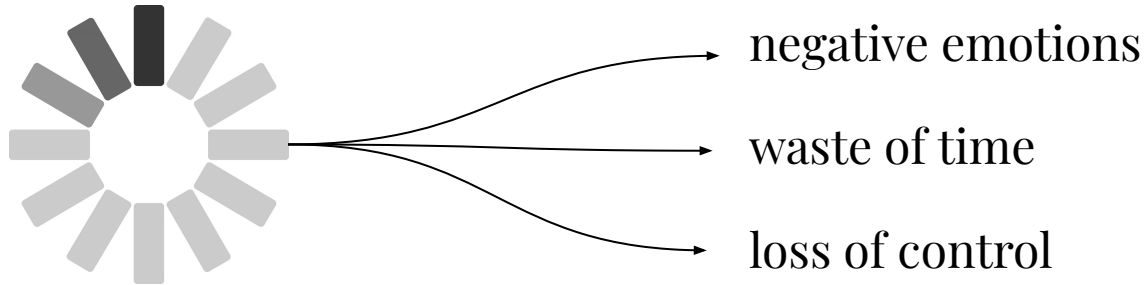
Who loves loading indicators?



Let's ask ChatGPT

Me: Why do people **hate waiting?**

ChatGPT: People dislike waiting because it goes against their desire for **efficiency, control**, and immediate fulfillment of their needs and **expectations**.



YOU can save lives!

- Let's help **save** those **frustrated** people 🤨
- **Speed-up** our sluggish React **apps** 🐌
- Make **users** **happy** again! 😊

Demo React app



YouTube Clone

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New Videos



Daya - New (Lyrics)
7clouds



3



My Family is Wednesday Addams -
Wolfoo Family Stories for Ki
Wolfoo Canada



5



NEW F2P KILL RECORD in World of
Tanks!
QuickyBaby



0



TRUMP Campaign releases new ad,
"Wolves"
KUSI News



2



Zihaal e Miskin (Video) Javed-Mohsin |
Vishal Mishra, Shreya
VYRLOriginals



17



Daya - New (Lyrics / Lyrics Video)
NewMelody



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HW News - New Intel GPUs, Metal
Fans, Gigabyte Backdoors, &a
Gamers Nexus



6



Kya Loge Tum | Akshay Kumar | Amyra
Dastur | BPraak | Jaani
DM - Desi Melodies



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NEW Star Wars Game! Star Wars:
Outlaws Gameplay Trailer Re
AhnaldT101



1



Tye Tribbett - New (Lyric Video)
TyeTribbettVEVO



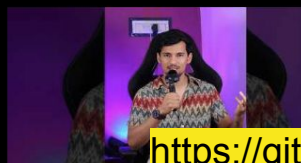
15



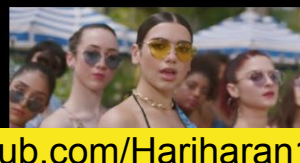
Phir Aur Kya Chahiye! Zara Halka Zara



Tesla Stock Could Set New Wining



BALENCIAGA Tony kdkker New Song



Dua Lipa - New Rules (Official Music



#TheMomentNewYorkersToldCanada

https://github.com/Hariharan107/YouTube_Clone



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<Actions/>

How to optimize React performance?

- ① Seek for unnecessary re-renders of React components
 - *Memoization allows us to cache heavily*
- ② Render only what's visible
 - *Lazy-loading allows us to load less initially, thus load the content faster*

The game
starts now

Saved lives



①

Seeking
unnecessary
re-renders

Demo →

useCallback(fn, dependencies)

useCallback is a React hook that lets you

- **cache a function definition** between re-renders
- skip re-rendering of components
- optimizing useEffect runs



memo(Component, arePropsEqual?)

memo is a HOC that lets you

- render a component only once, **unless props change**

// *If the component usually renders with **different props**,
most likely you **don't need React.memo()***

» Is the performance gain significant? **Measure it!**

useMemo(calculateValue, dependencies)

useMemo is a React hook that lets you

- **cache the result of a calculation** between re-renders
- skip expensive recalculations
- skip re-rendering of components



②

Render
only
what's visible

Demo →

Intersection Observer web API

IntersectionObserver lets you

- **detect visibility of an element,**
or the relative visibility of two elements in relation to each other
- ideal for **lazy-loading of any content** when a page is **scrolled into view**



lazy(loadFn)

lazy lets you

- **defer loading of component's code**
until it is rendered for the first time
- code-splitting is necessary into smaller JS chunks
- less JS code in the browser » faster UI

Conclusion

You have learned today...

- how to find unnecessary re-renders in React Profiler
- how to use `memo`, `useMemo`, `useCallback`
- how to use `lazy`, `IntersectionObserver`

Maybe next time...

- how to use `useTransition`
- how to use `requestIdleCallback`
- “Windowing” in React

*You saved
lives today*




Thank You

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 Yoga lover

 I like innovations and focus on usability

 Motto: “Keep it simple, stupid”

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