

The Future of UI/UX

AI Generated Interfaces Tailored Just-In-Time

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David vonThenen

- Are you Human or an AI?
- I want 5 Kubernetes
- Virtual Machines are Real
- Cloudy, cloudy, cloudy...
- There is storage for that!

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Agenda

- Picture The Ideal UI/UX
- Required **Future** Advancements
- What's Happening Now in UI/UX
- Demo: The Possibilities...
- Q & A

Picture The Ideal UI/UX

Looking Hypothetically: Most Efficient and Effective

Gesture-Based Interface

Video Credit:
Paramount Pictures
[Minority Report](#)



Simple Voice Assistant

Video Credit:
Paramount Pictures
[Star Trek \(1967\) S01E13: The Conscience of the King](#)



This Isn't New...



Voice Chat Interface

Video Credit:
Paramount Pictures
[Star Trek TNG S05E12 - Violations](#)



Neural Interface?

Video Credit:
Paramount Pictures
[Star Trek Voyager \(S07E2526\): End Game](#)



Required **Future** Advancements

Requirements for the "Ideal" Interface

Situational Awareness



Memory... And A Lot Of It

Image Credit:
Twitter / X - [Sam Altman](#)
[ChatGPT Memory Tweet](#)



Large Amounts of Data...



Macro Level



Micro Level



More Importantly... About You



Image Credit:
[Big data and cyber espionage – you've got to know this!](#)
Website: allerin.com

Relevant Data... Now



Image Credit:
[So you have data. Now what?](https://www.campaignasia.com)
Website: campaignasia.com

What's Happening Now in UI/UX

Putting the Dots Close Enough Together...

Data Science in UI/UX

Image Credit:
OpenAI Blog - [Sam & Jony introduce io](#)

Sam & Jony introduce io



This is an extraordinary moment.

Need UI/UX User Data

Image Credit:

[OpenAI is reportedly developing its own X-like social media platform](#)
TechCrunch

OpenAI is reportedly developing its own X-like social media platform

OpenAI is building its own X-like social media network, according to a new report from [The Verge](#). The project is still in the early stages, but there's an internal prototype focused on ChatGPT's image generation that contains a social feed.

The report states that it's unknown if OpenAI plans to launch the social network as a standalone app or if it plans to integrate it within the ChatGPT app.

With this new social network, OpenAI could compete with Meta's social platforms, Facebook and Instagram. It could also allow OpenAI to access real-time user data, which both X and Meta already have.



Sam Altman  
@sama

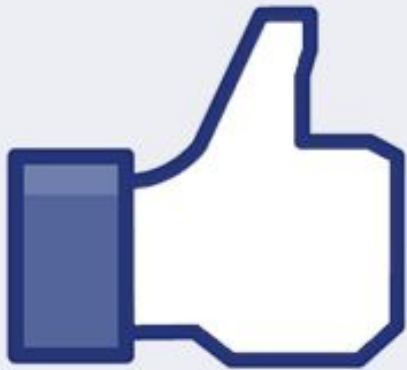
no thank you but we will buy twitter for \$9.74 billion if you want

1:11 PM · Feb 10, 2025 · **33.6M** Views

Data About You & How You Think...



Dislike



Like

User Adaptive UI/UX

Image Credit:

[Dynamic User Interfaces: The Future is Now](#)

Website: alexhogan.me



Already Being Looked Into...

Adapting User Interfaces with Model-based Reinforcement Learning

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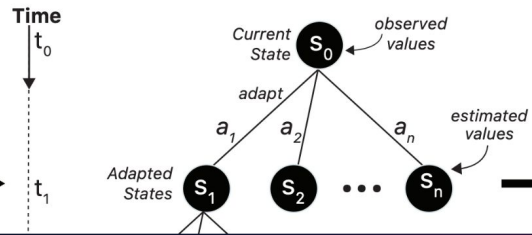
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Current Design

Open
New
Save
Save As...
Export
Move To...
Rename

Model-Based Reinforcement Learning



Adapted Design

Open
New
Save
Save As...
Export
Move To...
Rename

arXiv:2405.09255v1 [cs.LG] 15 May 2024

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arXiv:2405.09255v1 [cs.LG] 15 May 2024

Reinforcement Learning-Based Framework for the Intelligent Adaptation of User Interfaces

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(2024; 24 February 2024)

References:

<https://userinterfaces.aalto.fi/adaptive/resources/chi2021-todi-adaptive.pdf#:~:text=Figure%201%3A%20We%20present%20a,even%20with%20limited%20observation%20data>

<https://arxiv.org/html/2405.09255v1#:~:text=Adapting%20the%20user%20interface%20.To>

<https://arxiv.org/html/2405.09255v1#:~:text=Adapting%20the%20user%20interface%20.To>

Everyone Has An Agent...

Image Credit:
[Reimagining Retail: Personal AI Agents and the Shopping of Tomorrow](#)
Website: [maria.io](#)



Demo: Your Interests

<https://youtu.be/DmyvSFp4ets>

Resources

Resources

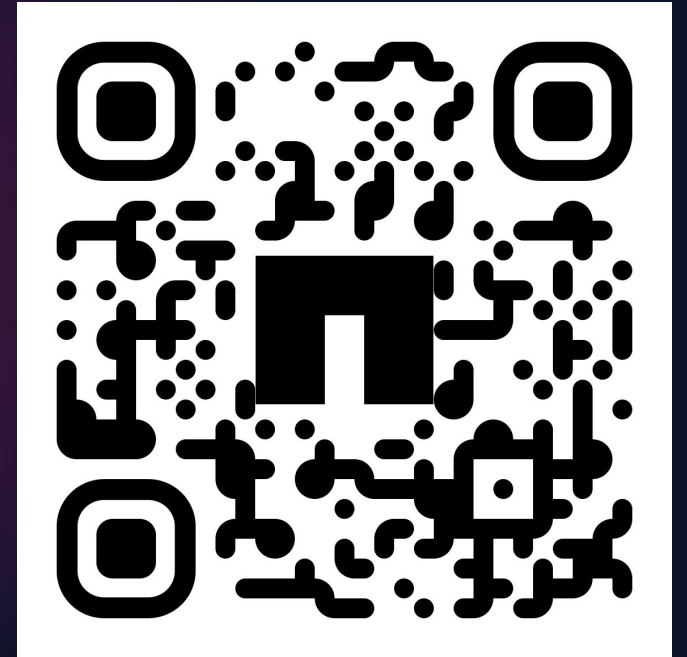
All Materials/Code:

github.com/davidvonthenen/2025-render-atl

Let's Chat on Discord: discord.gg/NetApp

Articles, Code, etc

- [Adapting User Interfaces with Model-based Reinforcement Learning](#)
 - github.com/aalto-ui/chi21adaptive
- [Reinforcement Learning-Based Framework for the Intelligent Adaptation of User Interfaces](#)



Thank You!

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