



# Využití AI při návrhu a optimalizaci UI

**Matěj Paclt**

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Specializace: **Aplikovaná informatika**

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## Cíle bakalářské práce

- Seznamte se s tématy velkých jazykových modelů, transformerů, neuronových sítí a principy návrhu grafických rozhraní.
- Nastudujte současný stav vývoje vybraných nástrojů souhrnně označovaných jako AI, jako jsou například: ChatGPT, Google Bard, Microsoft Azure chatbot, HuggingChat, GitHub Copilot a další.
- Připravte detailní porovnání výhod a nevýhod výše zmíněných technologií při návrhu a také optimalizace existujícího uživatelského rozhraní.
- Porovnejte jednotlivé nástroje, navrhněte optimální postup při návrhu a optimalizaci UI.
- Porovnejte návrh UI s použitím AI a bez jejich využití, vyzdvihněte výhody a nevýhody těchto technologií.

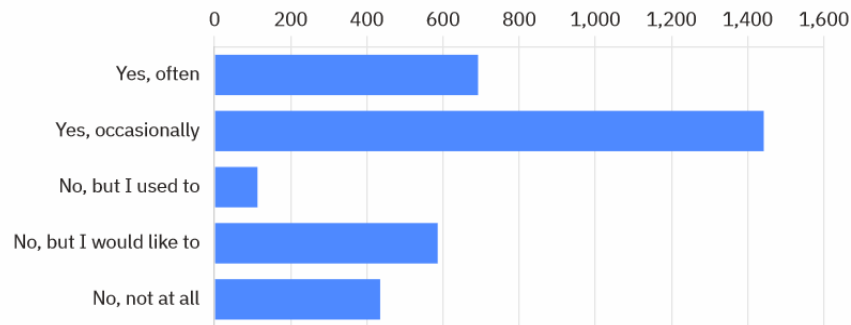
## Motivace bakalářské práce

- Rychlý rozvoj umělé inteligence
- Nezmapovaný a nepřehledný trh AI nástrojů pro tvorbu uživatelského rozhraní
- Motivace objasnit schopnosti jazykových modelů při návrhu a tvorbě UI/UX
- Nastínění potenciální časové úspory při užívání různých typů AI softwaru

# Grafy rozšíření AI nástrojů v UI/UX průmyslu

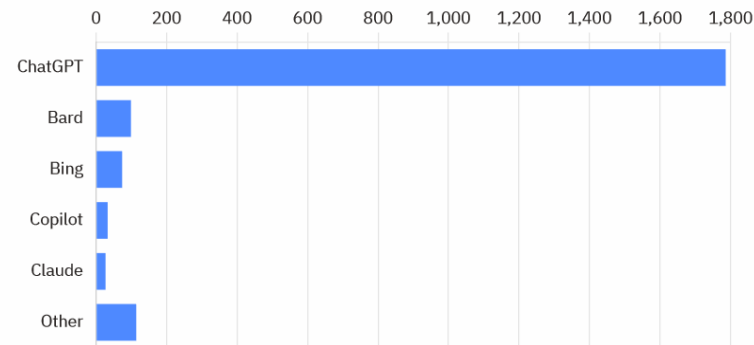
## AI Usage

Do you use an AI assistant as part of your regular work?



## AI Assistants

Which AI assistant do you primarily use?



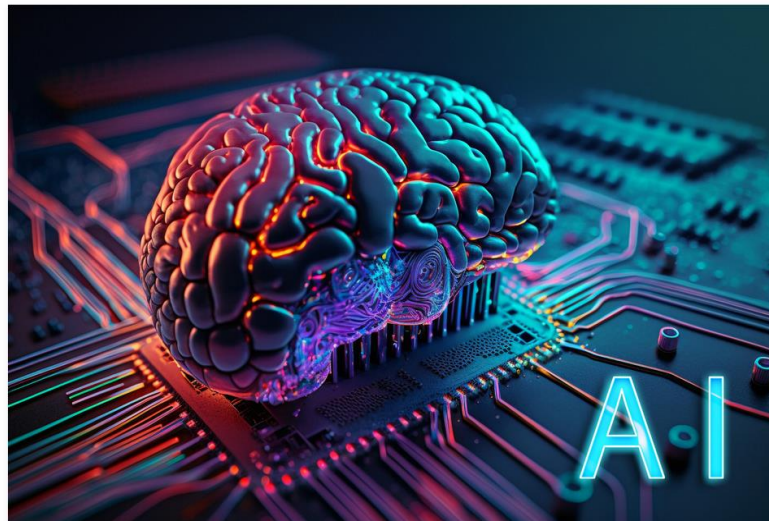
# Schéma experimentu

Typ projektu Způsob tvorby	Webové noviny	Eshop s módou	Lifestyle aplikace
Manuální tvorba	Visual Studio Code HTML,CSS,JavaScript	Figma	Figma
S pomocí jazykových modelů	ChatGPT	Microsoft Copilot	Gemini
S pomocí UI nástrojů s umělou inteligencí	Uizard Wireframe Scanner	Musho + Ando + Magician	Uizard Autodesigner
Kombinací různých nástrojů	Midjourney + ChatGPT + Uizard	Midjourney + Fronty	Midjourney + Microsoft Copilot
Optimalizace UI	Uizard	Locofy + Github Copilot	Midjourney + Github Copilot

# Webové noviny s ChatGPT

## Article Headline

By: John Doe



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City Life



Earth Exploration



Meadow Serenity

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Choose from our wide seasonal sales



Pick from our categories



Shoes



Jackets



Accessories

Choose from our products

Eshop a  
Microsoft  
Copilot  
(2/2)

NEW




Product Name

Old-Price New Price

Add to Cart

NEW




Product Name

Old-Price New Price

Add to Cart

NEW




Product Name

Old-Price New Price

Add to Cart

NEW




Product Name

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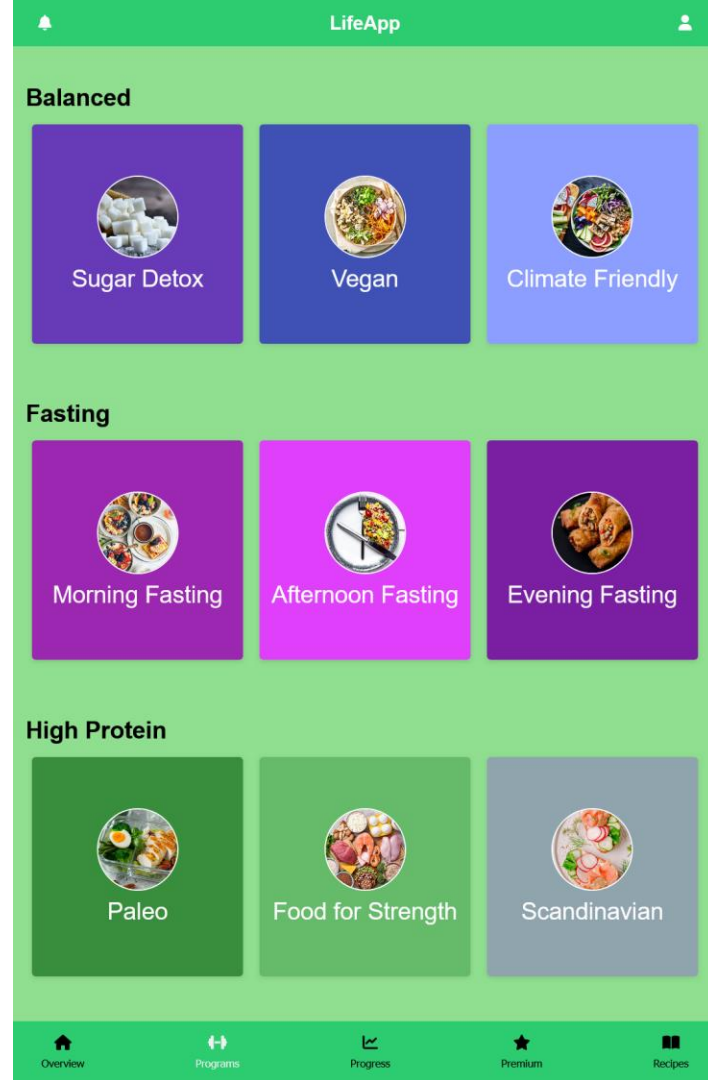
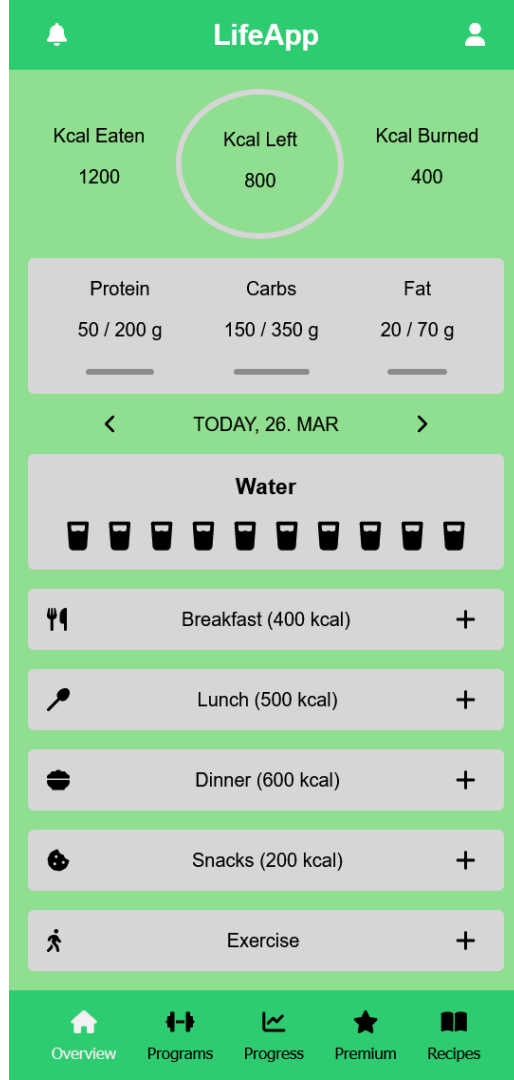
Old-Price New Price

Add to Cart



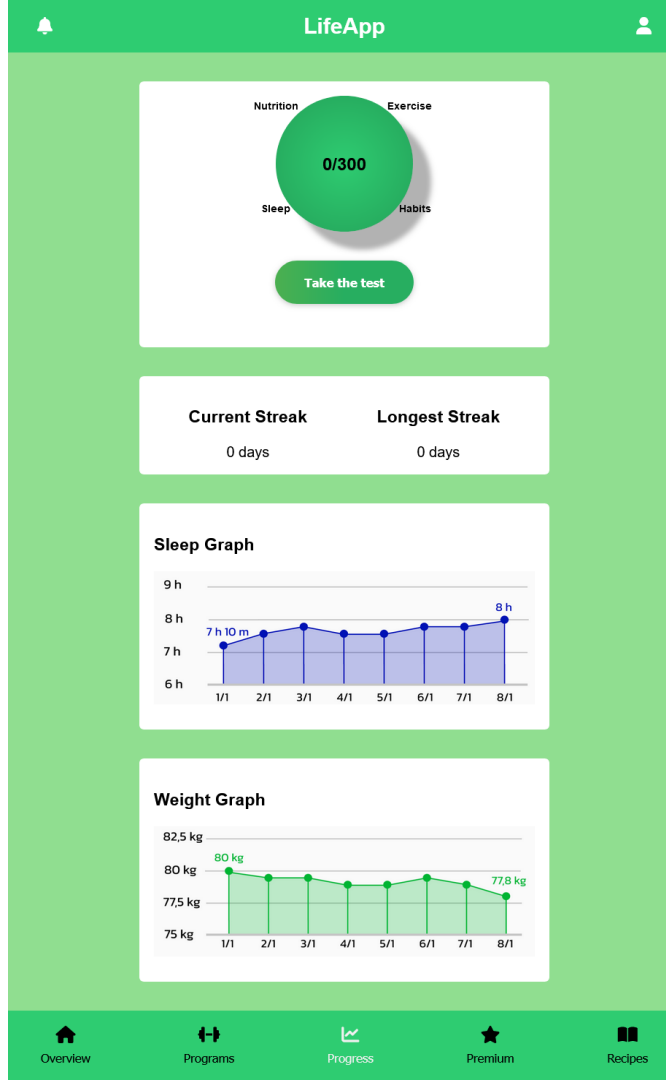
# Lifestyle aplikace a Google Gemini (1/2)

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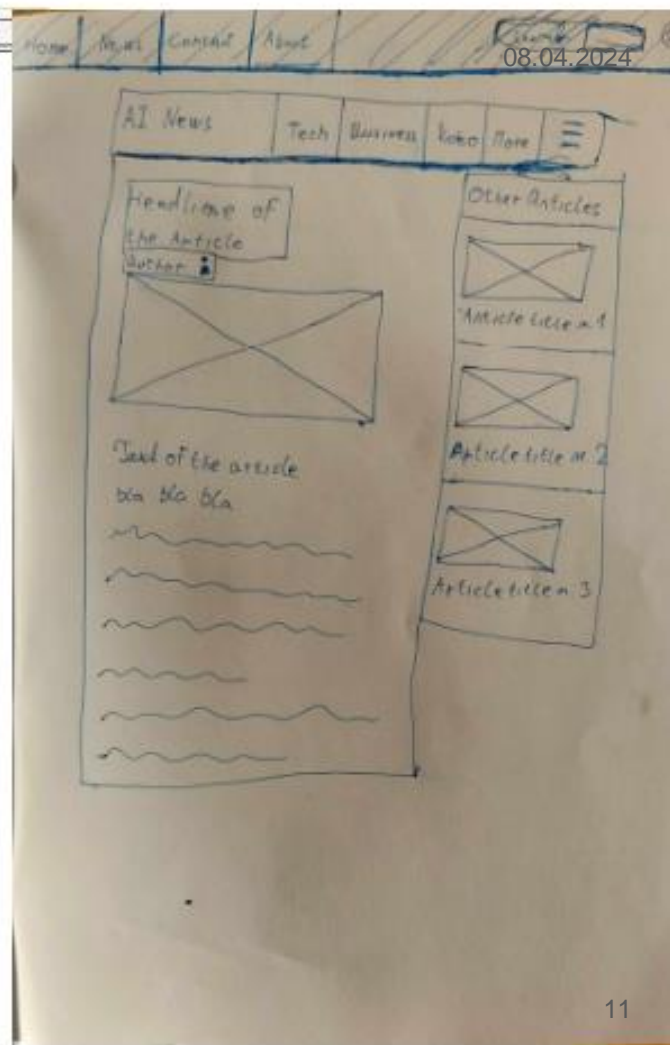
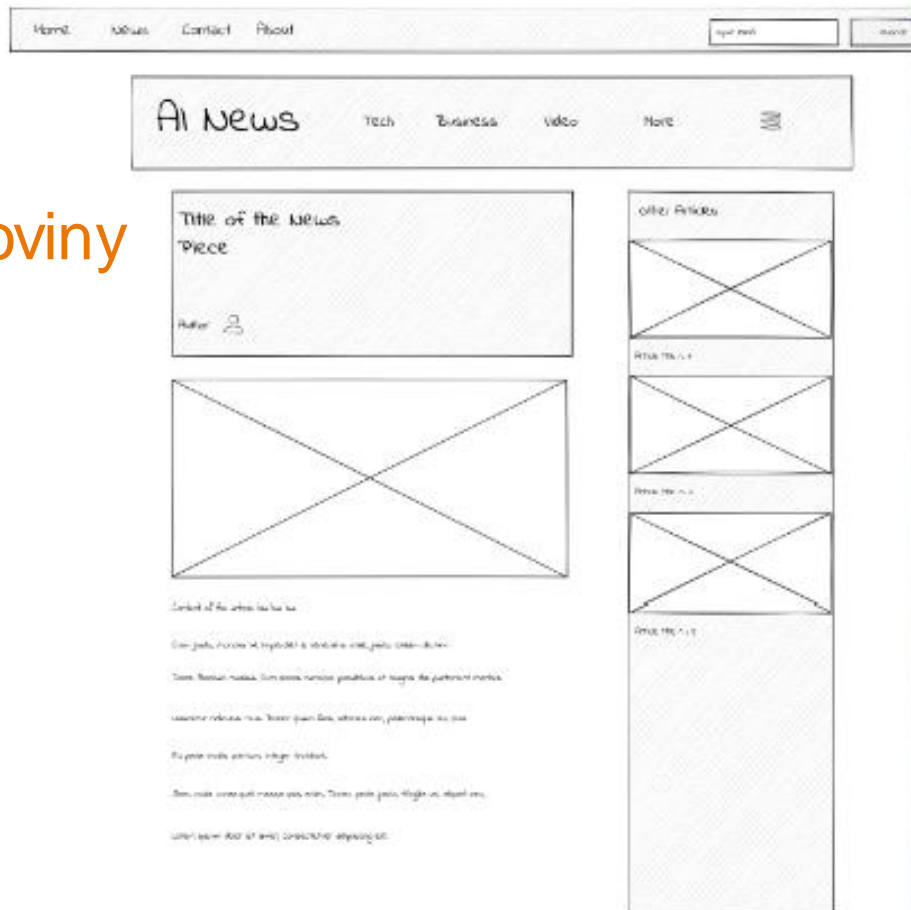
# Lifestyle aplikace a Google Gemini (2/2)

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08.04.2024

# Webové noviny a Uizard Wireframe Scanner



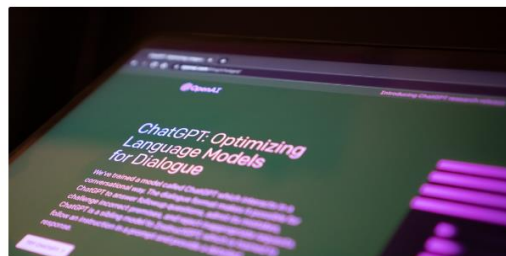
## AI News

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Title of the News  
PieceAuthor 

Content of the article: bla bla bla

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Dolor. Aenean massa. Cum sociis natoque penatibus et magnis dis parturient montes

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## Other Articles



Article title n. 1



Article title n. 2

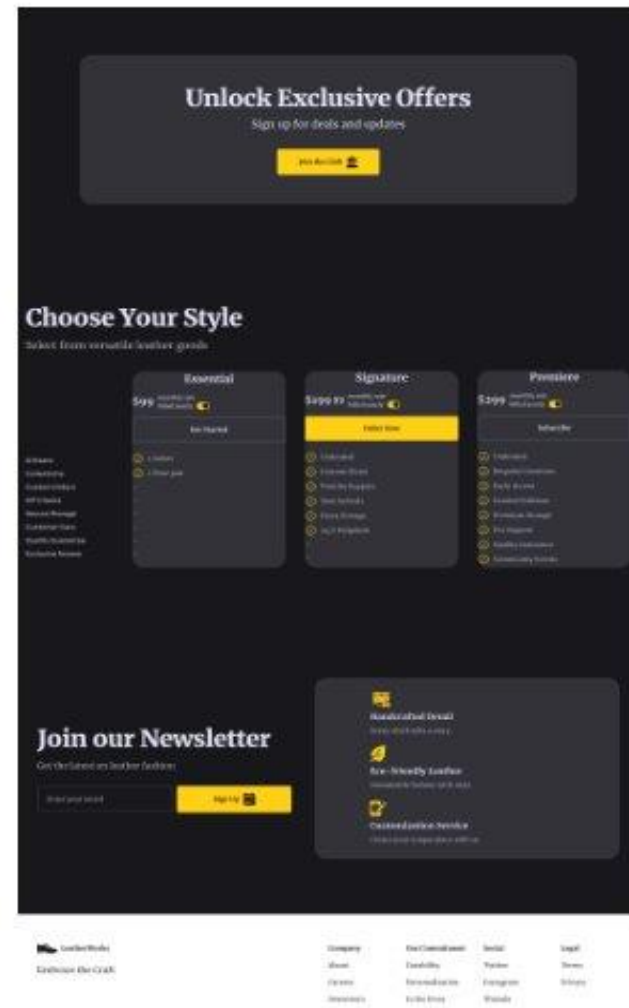
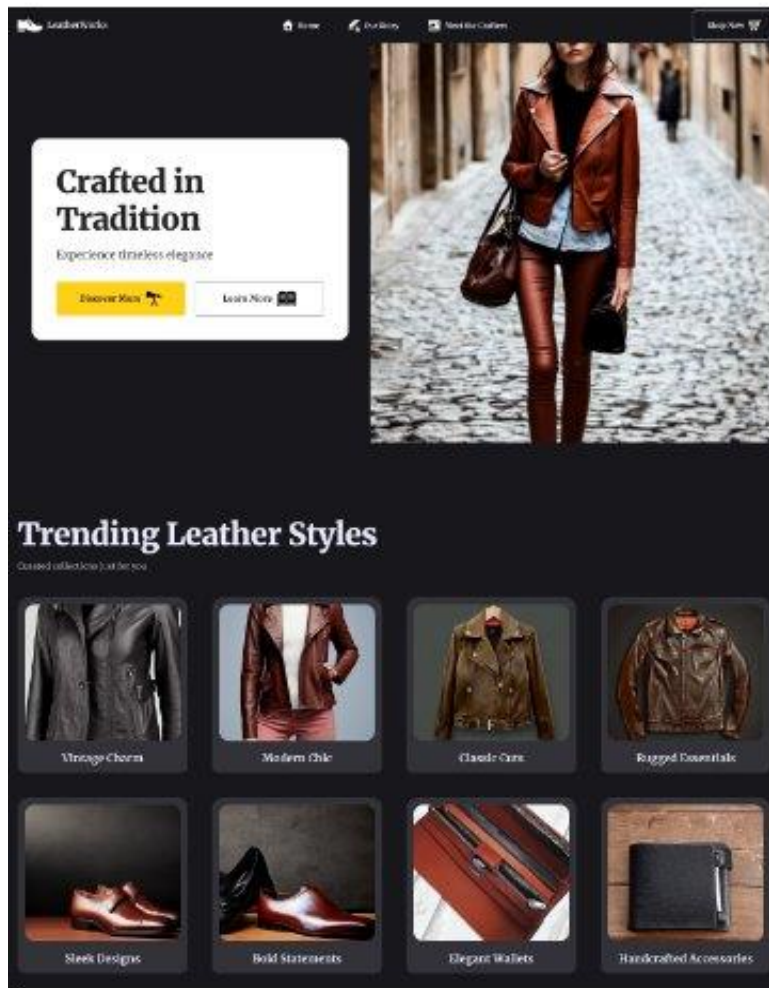


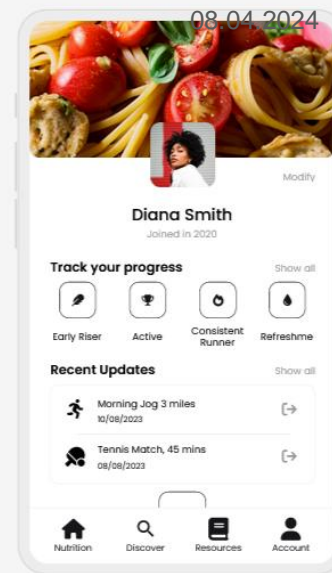
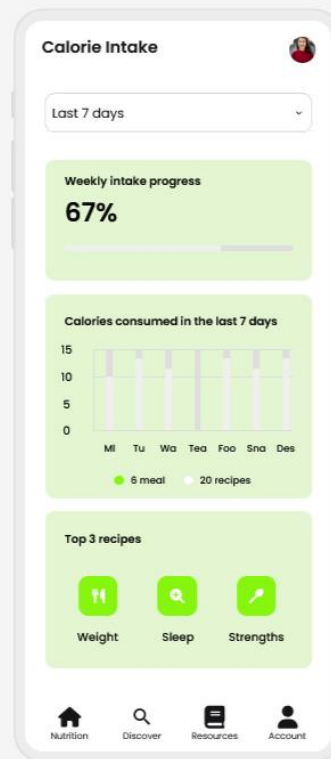
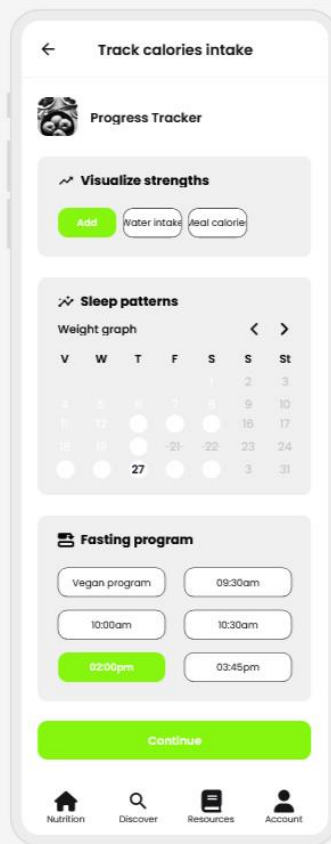
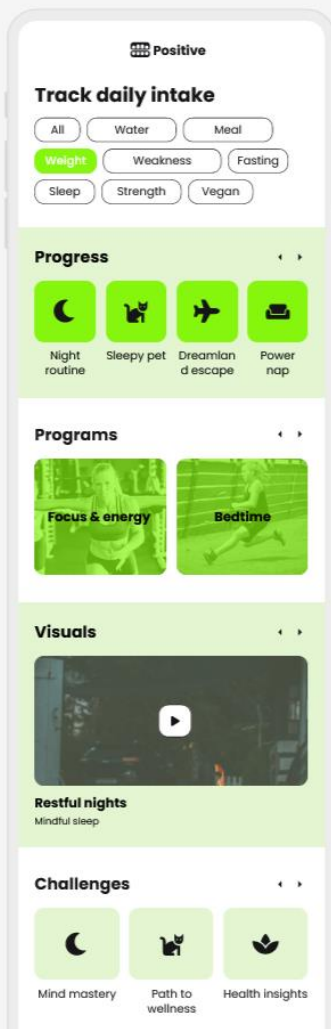
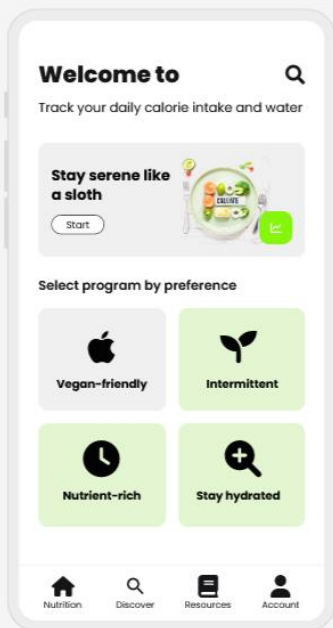
Article title n. 3

# Webové noviny a Uizard Wireframe Scanner

# Eshop a Musho + Ando + Magician

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Lifestyle aplikace  
a Uizard  
Autodesigner



# Webové noviny a Midjourney + ChatGPT + Uizard

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Article Overview: Sub

Balancing Innovation with Responsibility

10/10/2023

As artificial intelligence continues to permeate various aspects of society, the ethical implications of its deployment have come under intense scrutiny.

From healthcare decisions and legal judgments to surveillance and potential misuse, the ethical implications of AI deployment have become a complex and multifaceted issue.

As technology advances, it's crucial to ensure that AI development is guided by a strong ethical framework that prioritizes human values and well-being.



AI in Healthcare: Revolutionizing Patient Care

AI Ethics in Autonomous Weapons:  
Navigating the Moral Landscape of  
Lethal Technology

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AI in Art: Exploring Creativity  
and Expression in the Digital Era

The intersection of artificial intelligence and art is sparking a renaissance in creativity and expression, challenging traditional notions of authorship, aesthetics, and artistic production. AI algorithms are being used to generate original artworks, compose music, and even write literature, blurring the boundaries between man and machine in the creative process.

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## Breakthrough in Neural Network Architecture: A Step Forward in AI Development

Recent advancements in neural network architectures have propelled AI development to new heights, opening unprecedented opportunities for innovation and discovery. These breakthroughs have enabled researchers to design more efficient and powerful models, leading to faster training times and improved performance across a wide range of applications.

This breakthrough marks a significant step forward in the evolution of artificial intelligence, with implications spanning from autonomous vehicle development to more sophisticated natural language processing systems.

AI in Healthcare: Revolutionizing Patient Care

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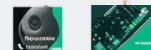
AI Integration in Healthcare:  
Revolutionizing Patient  
Care

The integration of artificial intelligence in healthcare is revolutionizing patient care, offering unprecedented opportunities for diagnosis, treatment, and personalized medicine. AI-powered tools are enabling doctors to analyze vast amounts of medical data, identify patterns, and make more accurate predictions about patient outcomes.



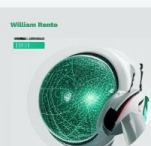
Robust AI Algorithms:  
Enhancing Security in the  
Digital Age

In an era where cyber threats are becoming increasingly sophisticated, robust AI algorithms are essential for enhancing security in the digital age. These algorithms can detect and respond to threats in real-time, providing a more secure and resilient environment for businesses and individuals alike.



The Future of Autonomous  
Vehicles: AI Driving Innovation  
on the Roads

AI in Healthcare: Revolutionizing Patient Care



AI and Climate Change:  
Leveraging Technology for  
Environmental Solutions

AI in Healthcare: Revolutionizing Patient Care



AI-Powered Education:  
Transforming Learning  
in the 21st Century

The integration of artificial intelligence in education is transforming learning in the 21st century, offering personalized and adaptive learning experiences. AI-powered platforms are enabling educators to tailor their instruction to individual students, providing targeted support and resources to ensure every learner succeeds.

The Role of AI in Healthcare:  
Empowering Daily Tests and Treatments

AI in Healthcare: Revolutionizing Patient Care

As AI technology continues to evolve, its application in healthcare is expanding the way doctors diagnose and treat patients, leading to more accurate and personalized care.

From Research Labs to Real World

AI in Healthcare: Revolutionizing Patient Care

AI in Healthcare: Revolutionizing Patient Care

The transformative impact of artificial intelligence is revolutionizing various industries worldwide, from manufacturing and finance to transportation and entertainment.

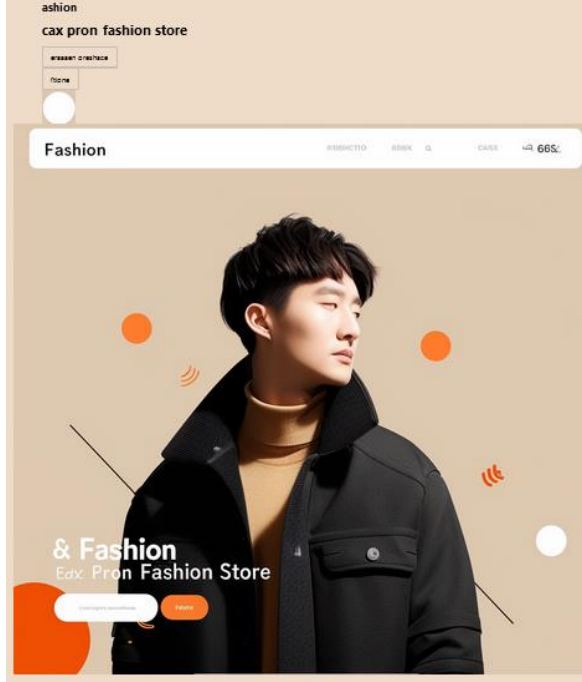
As AI technology matures and becomes more accessible, businesses are leveraging machine learning, natural language processing, and computer vision to drive innovation, optimize operations, and unlock new opportunities for growth.

Whether it's streamlining manufacturing processes, enhancing customer service, or optimizing supply chain management, AI is revolutionizing the way businesses operate and compete in the global market.

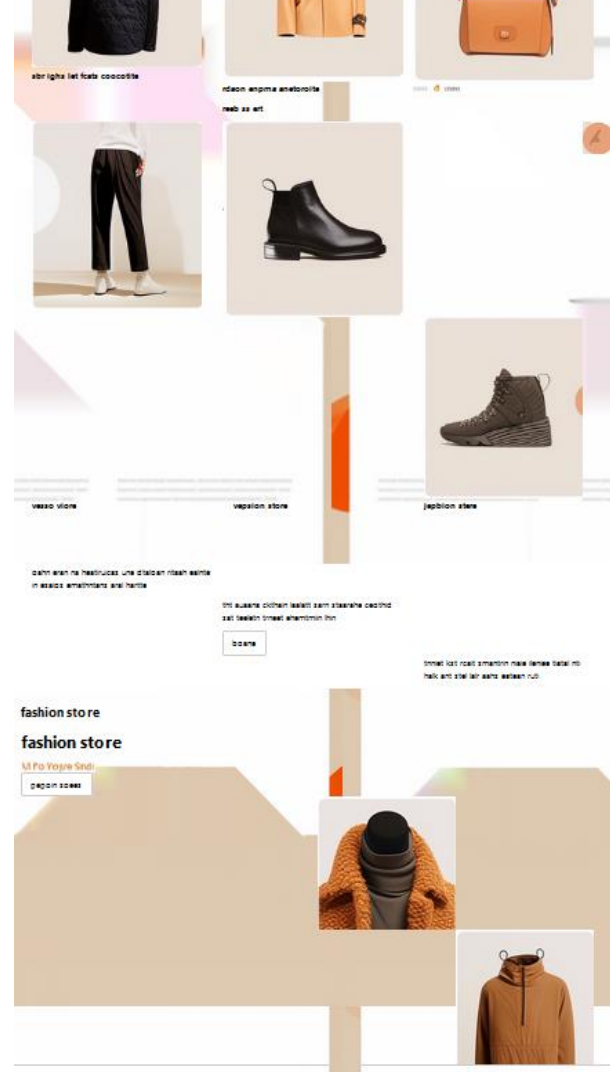


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# Eshop a Midjourney + Fronty



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# Tabulka výsledků

Projekt a nástroj	Čas	Obtížnost práce	Hodnocení designu
Webové noviny a HTML/CSS	180 minut	2 z 10	3 z 10
Módní e-shop a Figma	150 minut	4 z 10	5 z 10
Lifestylová aplikace a Figma	150 minut	4 z 10	7 z 10
Webové noviny a ChatGPT	30 minut	7 z 10	4 z 10
Módní e-shop a Microsoft Copilot	45 minut	6 z 10	4 z 10
Lifestylová aplikace a Google Gemini	120 minut	6 z 10	1 z 10
Webové noviny a Uizard Wireframe Scanner	30 minut	4 z 10	3 z 10
Módní e-shop a Musho + Ando + Magician	35 minut	7 z 10	8 z 10
Lifestylová aplikace a Uizard Autodesigner	5 minut	10 z 10	10 z 10
Webové noviny a Midjourney + ChatGPT + Uizard	30 minut	7 z 10	6 z 10
Módní e-shop a Midjourney + Fronty	20 minut	3 z 10	1 z 10
Lifestylová aplikace a Midjourney + Microsoft Copilot	40 minut	6 z 10	7 z 10
Optimalizace webových novin a Uizard	10 minut	10 z 10	5 z 10
Optimalizace módního e-shopu a Locofy + Github Copilot	40 minut	8 z 10	6 z 10
Optimalizace lifestyle aplikace a Midjourney + Github Copilot	35 minut	7 z 10	8 z 10

# Závěr

- Velká většina AI nástrojů a postupů urychluje práci designéra
- Avšak pouze některé z nich zvyšují její kvalitu
- Jazykové modely - rady při kódování nebo i návrh kódu celé stránky, horší designová kvalita
- Schopnosti jednotlivých AI nástrojů pro UI/UX design se zásadně liší
- Nejlepší je Uizard, AI Figma pluginy jsou také užitečné
- Fronty je velice chabý nástroj
- Midjourney nabízí několik užitečných funkcí pro inspiraci při návrhu designu
- AI nástroje mají silnější placené verze
- Pro práci s AI je třeba mít znalosti prompt engineeringu



# Děkuji za pozornost

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Specializace: **Aplikovaná informatika**

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