



INFORMATIKA

I. predavanje
akademska godina 24/25

Cilj kolegija

Cilj ovog kolegija je omogućiti studentima da nauče:

- pretraživati Internet u svrhu pronalaženja informacija i podataka
- koristiti i prilagoditi program za rad s elektroničkom poštom u svrhu komunikacije i organizacije
- kreirati i upravljati dokumentima s pomoću programa za obradu teksta

Ishodi učenja

Ishod	MINIMALNI ISHODI UČENJA (po uspješnom završetku kolegija, student će moći)	ŽELJENI ISHODI UČENJA (uspješan student bi trebao moći)
I1	Pretraživati Internet u svrhu pronalaženja informacija i podataka.	Pretraživati Internet koristeći napredne mogućnosti tražilica u svrhu pronalaženja informacija i podataka.
I2	Koristiti program za rad s elektroničkom poštom u svrhu komunikacije i organizacije.	Prilagoditi program za rad s elektroničkom poštom upotrebom naprednih alata i mogućnosti programa.
I3	Koristiti osnovne alate i mogućnosti programa za obradu teksta u svrhu oblikovanja i upravljanja dokumentima.	Oblikovati složeni dokument koristeći napredne alate i mogućnosti programa za obradu teksta.

Kako je to raspoređeno po ishodima učenja

	Ishod	Ispit	Domaća zadaća	MAX
Međuispit/Ispit	I1	12	8	20
Međuispit/Ispit	I2	20		20
Ispit	I3	45	15	60
	Ukupno	77	23	100

Sažetak predavanja

- Osnovni pojmovi interneta
- Osnovno pretraživanje
- Napredno pretraživanje
- Google Maps
- Osnovni pojmovi generativne umjetne inteligencije
- Pisanje promptova – „prompt engineering”
- Osnove Outlooka
- Postavke Outlooka
- Quiz



Osnovni pojmovi interneta

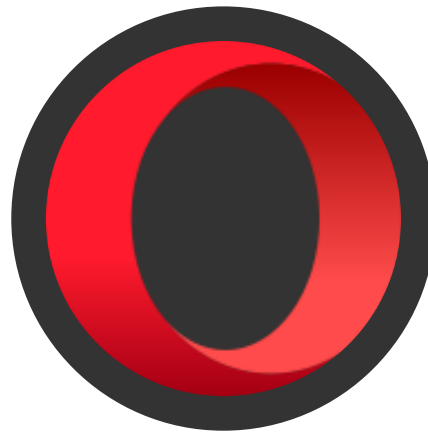
- **Što je Internet?**

„**Internet** je globalna mreža međusobno povezanih računala koja omogućuje razmjenu podataka i komunikaciju. Sastoji se od milijuna privatnih, javnih, akademskih, poslovnih i vladinih mreža koje su povezane pomoću različitih tehnologija, kao što su optički kablovi, sateliti i bežične veze.”

Osnovni pojmovi interneta

Internetski preglednici (web browser) :

- softverska aplikacija za pristup i pregledavanje informacija na internetu,
- interpretiraju **HTML kod** web stranica i prikazuju ih u korisničkom sučelju (**.html format**)



Osnovni pojmovi interneta

HTML (HyperText Markup Language):

- standardni jezik za izradu i strukturiranje web stranica

```
<!DOCTYPE html>
<html>
<head>
  <title>Naslov stranice</title>
</head>
<body>
  <h1>Dobrodošli na moju web stranicu</h1>
  <p>Ovo je primjer HTML dokumenta.</p>
  <a href="https://www.example.com">Posjeti Example</a>
</body>
</html>
```

AI-generated code. Review and use carefully. [More info on FAQ.](#)

Osnovni pojmovi interneta

<https://www.example.com/folder/page.html?id=123&sort=asc#section2>

URL - (Uniform Resource Locator):

- Jedinstvena adresa koja se koristi za pristup resursima na internetu.
- Prikaz web stranice, slika, videozapisa i drugih sadržaja.

Osnovni pojmovi interneta

`https://www.example.com/folder/page.html?id=123&sort=asc#section2`

URL dijelovi:

1. Protokol: Označava način prijenosa podataka. - http (HyperText Transfer Protocol) i https (sigurni HTTP).

- **Primjer:** https://

2. Domena: Naziv web stranice ili poslužitelja gdje se resurs nalazi.

- **Primjer:** www.example.com

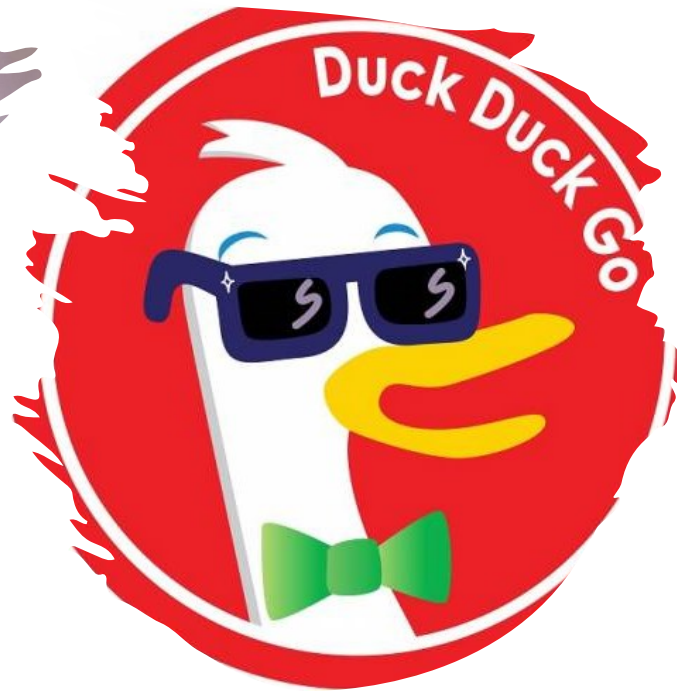
3. Putanja: Specifična lokacija resursa na poslužitelju.

- **Primjer:** /folder/page.html

4. Parametri (opcionalno): Dodatne informacije koje se šalju poslužitelju.

- **Primjer:** ?id=123&sort=asc

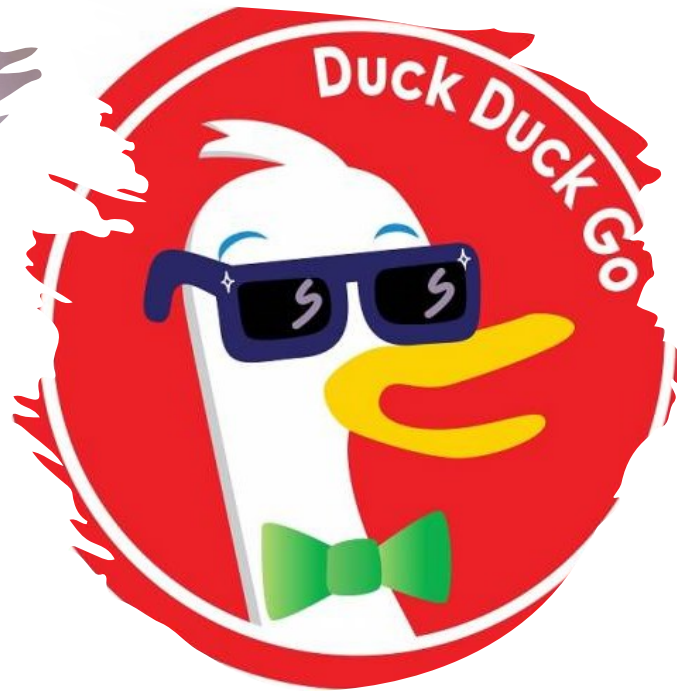
Bing



Osnovni pojmovi interneta- Internetske tražilice

- „**Internetske tražilice** (**search engine**) je softverski sustav dizajniran za pretraživanje informacija na internetu. Tražilice koriste **algoritme** za **indeksiranje web stranica** i pružanje relevantnih rezultata pretraživanja na temelju korisničkih upita.”

Bing



Osnovni pojmovi interneta

- **Pretraživanje:**
 - Osnovno i napredno
 - Po slikama
 - Pisanje upita

Osnovno pretraživanje

Google

🔍 Internetski marketing



Osnovno pretraživanje



Osnovno pretraživanje

Google

internetski marketing

All Images Videos News Web Books Finance

Wikipedia

Što je

I brendiranje vern

I brendiranje posao

Tools



Wikipedia

<https://hr.wikipedia.org/wiki/I...> · [Translate this page](#) · [⋮](#)

Internetski marketing

Internetski marketing ili digitalni marketing, još se i skraćeno naziva i-marketing, web marketing, online marketing, ili eMarketing, je proces izrade ...



algebra.hr

<https://www.algebra.hr/sveuciliste> · [Translate this page](#) · [⋮](#)

Internetski marketing - Sveučilište Algebra

Dvogodišnji stručni kratki studij internetskog **marketinga** priprema studente za karijeru u području marketinških komunikacija s naglaskom na internetske ...



d4web.com.hr

<https://www.d4web.com.hr/sto-j...> · [Translate this page](#) · [⋮](#)

Prikaz rezultata na različite načine

Napredno pretraživanje

The image shows a Google search page for the query "internetski marketing". The search bar is at the top, with a search icon on the right. Below the search bar are tabs for "All", "Images", "Videos", "News", "Web", "Books", and "Finance". A red box highlights the "Tools" button in the top right corner. Below the tabs are buttons for "Wikipedia", "Što je", "I brendiranje vern", and "I brendiranje posao". A red box highlights the "Advanced Search" button, with a red arrow pointing to the advanced search interface on the right. The advanced search interface has two columns of options. The left column is titled "Find pages with..." and includes: "all these words:" (input: "internetski marketing"), "this exact word or phrase:" (empty), "any of these words:" (empty), "none of these words:" (empty), and "numbers ranging from:" (empty). The right column is titled "To do this in the search box." and includes: "Type the important words: tri-colour rat terrier", "Put exact words in quotes: \"rat terrier\"", "Type OR between all the words you want: miniature OR standard", "Put a minus sign just before words that you don't want: Osnovno pretraživanje - Jack Russell", and "Put two full stops between the numbers and add a unit of measurement: 10..35 kg, £300..£500, 2010..2011". Below these are sections for "Then narrow your results by...": "language:" (any language), "region:" (any region), "last update:" (anytime), "site or domain:" (empty), "terms appearing:" (anywhere in the page), "file type:" (any format), and "usage rights:" (not filtered by licence). At the bottom right of the advanced search interface is a blue "Advanced Search" button. On the left side of the page, a dropdown menu is open for "Any time" and "All results". The "Any time" dropdown shows options: "Any time", "Past hour", "Past 24 hours", "Past week", "Past month", "Past year", and "Custom range...". The "All results" dropdown shows options: "All results" and "Verbatim".

Napredno pretraživanje

Find pages with...

all these words:

this exact word or phrase:

any of these words:

none of these words:

numbers ranging from:

to

To do this in the search box.

Type the important words: tri-colour rat terrier

Put exact words in quotes: "rat terrier"

Type OR between all the words you want: miniature OR standard

Put a minus sign just before words that you don't want:

Osnovno pretraživanje "Jack Russell"

Put two full stops between the numbers and add a unit of measurement:
10..35 kg, £300..£500, 2010..2011

Then narrow your results by...

language:

any language

Find pages in the language that you select.

region:

any region

Find pages published in a particular region.

last update:

anytime

Find pages updated within the time that you specify.

site or domain:

Search one site (like wikipedia.org) or limit your results to a domain like .edu, .org or .gov

terms appearing:

anywhere in the page

Search for terms in the whole page, page title or web address, or links to the page you're looking for.

file type:

any format

Find pages in the format that you prefer.

usage rights:

not filtered by licence

Find pages that you are free to use yourself.

Advanced Search

Napredno pretraživanje

- Unutar okvira za pretraživanje:
 - **isključivanje** pojedinog **pojma** pomoću **–Pojam**
 - **Citiranje**: „ **Danas je ...**”



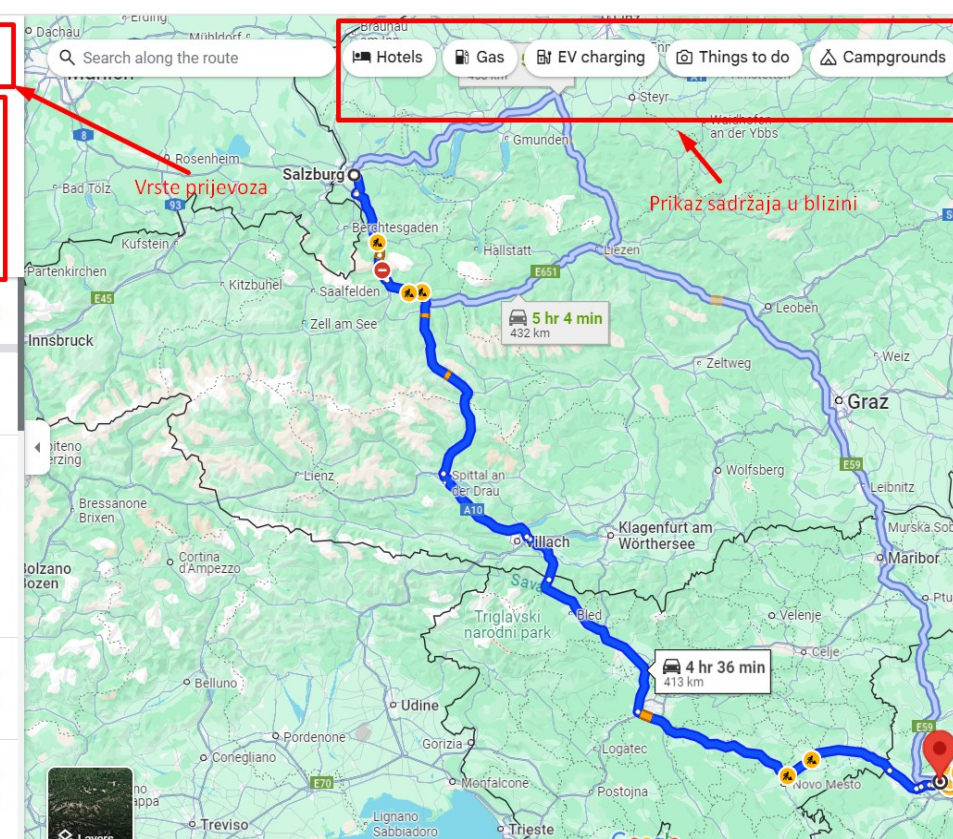
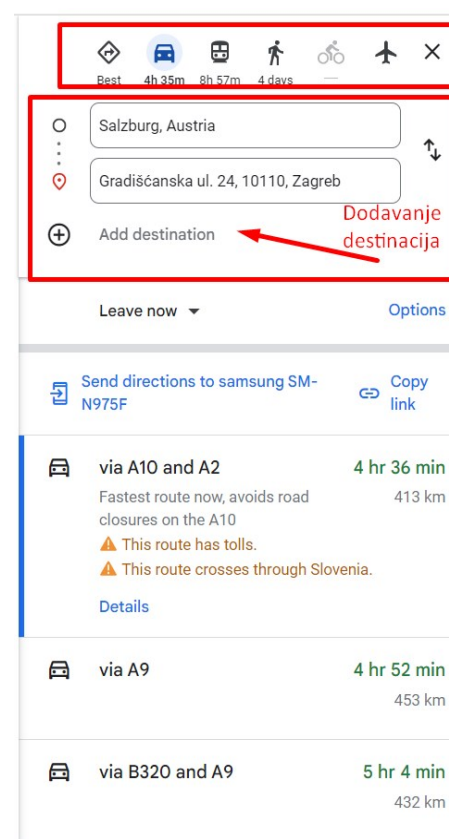
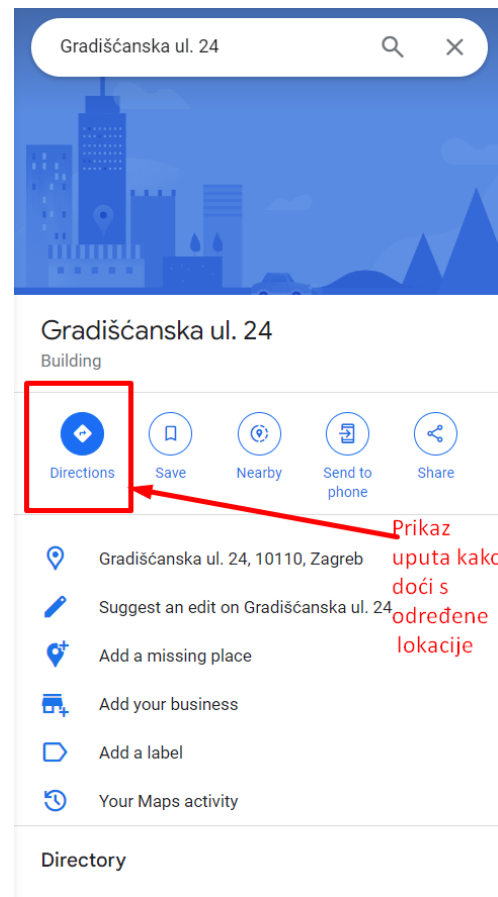
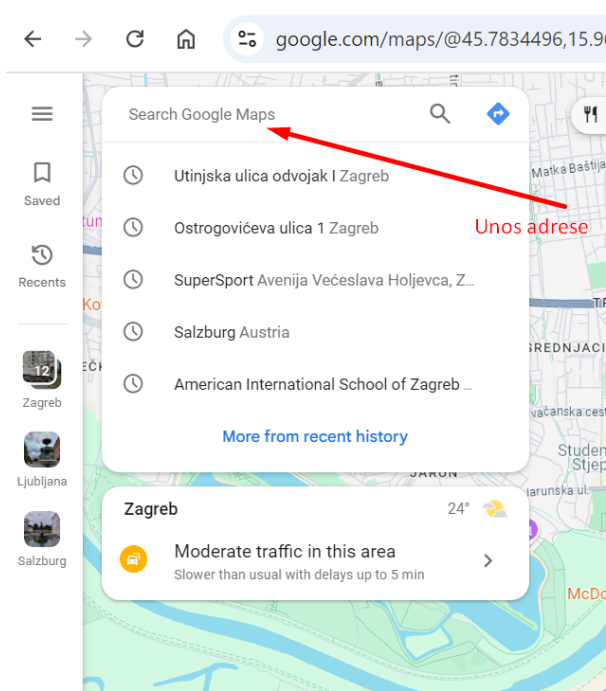
GENERAL SEO

Google Search Operators: The Complete List (44 Advanced Operators)

By [Joshua Hardwick](#)

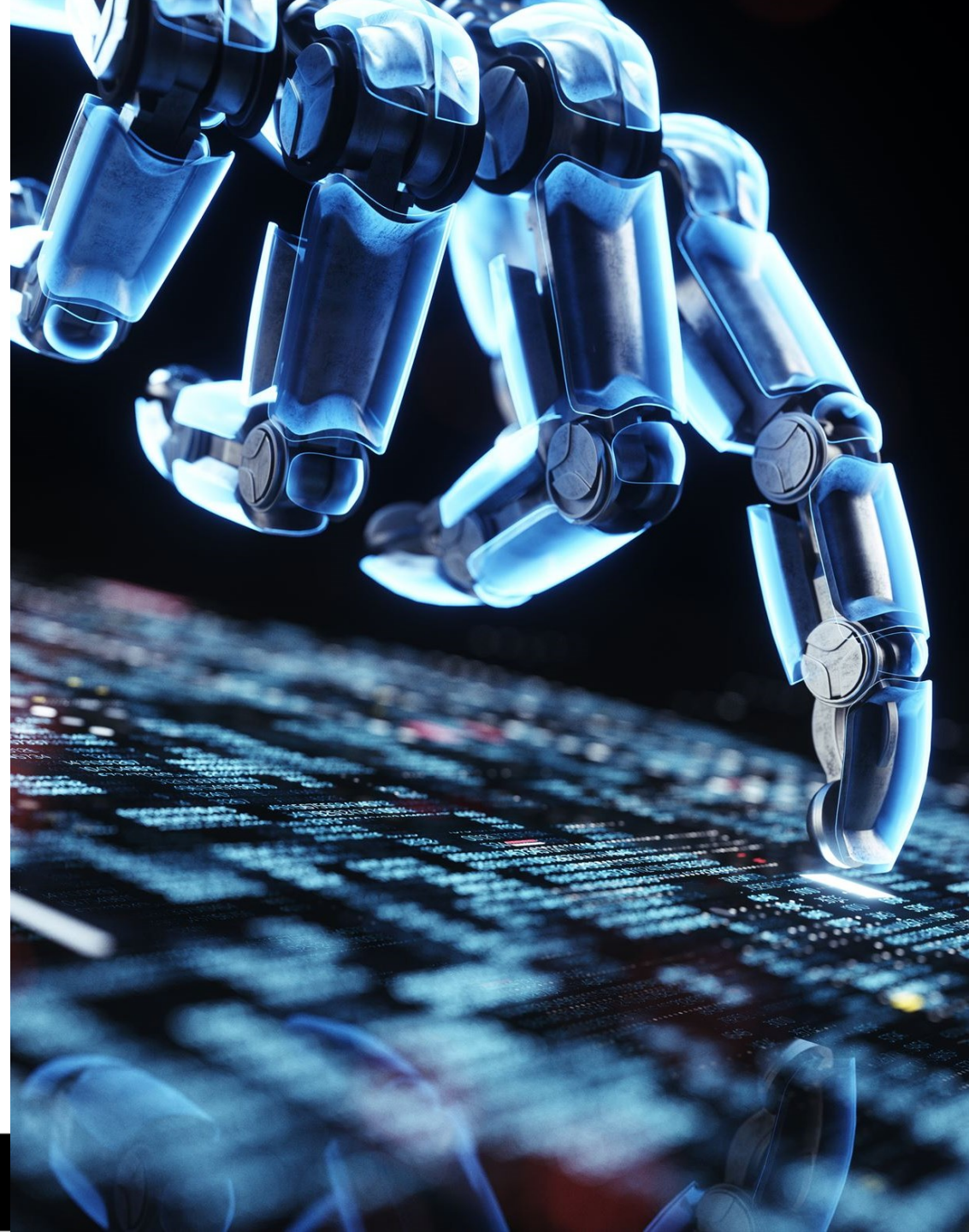
Updated: March 8, 2024 ▪ 12 min read

Google Maps <https://www.google.com/maps>



Osnovni pojmovi generativne umjetne inteligencije

- Podskup umjetne inteligencije
- Koristi tehnike strojnog učenja
- Stvara "ljudski" sadržaj
- **Microsoft Copilot**
 - Daje informacije, odgovara na pitanja, uključuje se u razgovore
 - Koristi u radu napredne AI modele i Bing pretraživanje



Generativni AI

- Zasnovan na **statistici, podatkovnoj znanosti** i **strojnom učenju**
- Koristi tehnike **dubokog učenja (Deep Learning)** za modele **LLMs (Large Language Models)** za **NLP (Natural Language Processing)** zadatke poput:
 - Analize sentimenta
 - Izradu sažetaka
 - Usporedbu dokumenata
 - Stvaranje novog prirodnog jezika
- Stvara sadržaj na temelju prirodnog jezika (**natural language input**)
- Stvoreni sadržaj može biti **tekst, slika, kód, video,...**
- Modeli mogu biti **multimodalni**

Struktura



Uloga generativne umjetne inteligencije u društvu



Generativne AI tehnologije kao Microsoft Copilot su sve više ugrađeni u svijesti ljudi

Mogućnost stvaranja „ljudskog” sadržaja



Nije uključeno nikakvo čarobnjaštvo, samo primjena matematičkih tehnika

Na temelju istraživanja statistike, podatkovne znanosti i strojnog učenja



Razumijevanje temeljnih koncepata može pomoći u razvoju novih mogućnosti za AI

Zašto sada?

- **Arhitektura neuronske mreže**
 - Transformeri
 - GANS (Generative Adversarial Network)
- **Povećanje računalne moći**
 - GPU
 - TPU
- **Dostupnost velike količine podataka**



Generativni UI modeli



Generiranje teksta
(Chat GPT, Bard,
Gemini)

Generiranje zvuka
(Suno, HeySen)

Generiranje slika
(Stable diffusion,
Midjourney)

Generiranje video
sadržaja
(Midjourney,
Moonvalley)

Benefiti generativne UI

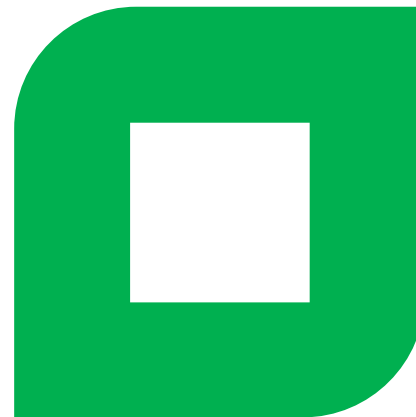
- Poboljšanje inovativnosti i kreativnosti
- Povećanje podataka i simulacija
- Personalizacija
- Učinkovitost i automatizacija
- Rješavanje problema i podrška pri odlučivanju



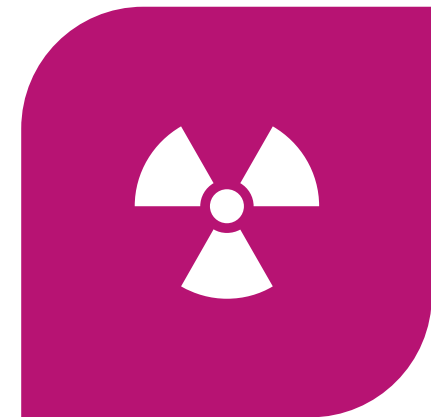
Nedostaci generativne umjetne inteligencije



OGRANIČENJA I
PRISTRANOSTI



CRNA KUTIJA



ŠTETNE UPORABE

ETHICAL ARTIFICIAL INTELLIGENCE

Responsible

Reliable

Equitable

Governable

Traceable

Pisanje promptova – „prompt engineering”



Cilj

Izveštaji
Sažetci
Nacrt
Priča



Kontekst

Publika
Namjera
Okolina



Očekivanje

Ton (opušteni,
profesionalni)
Duljina



Source

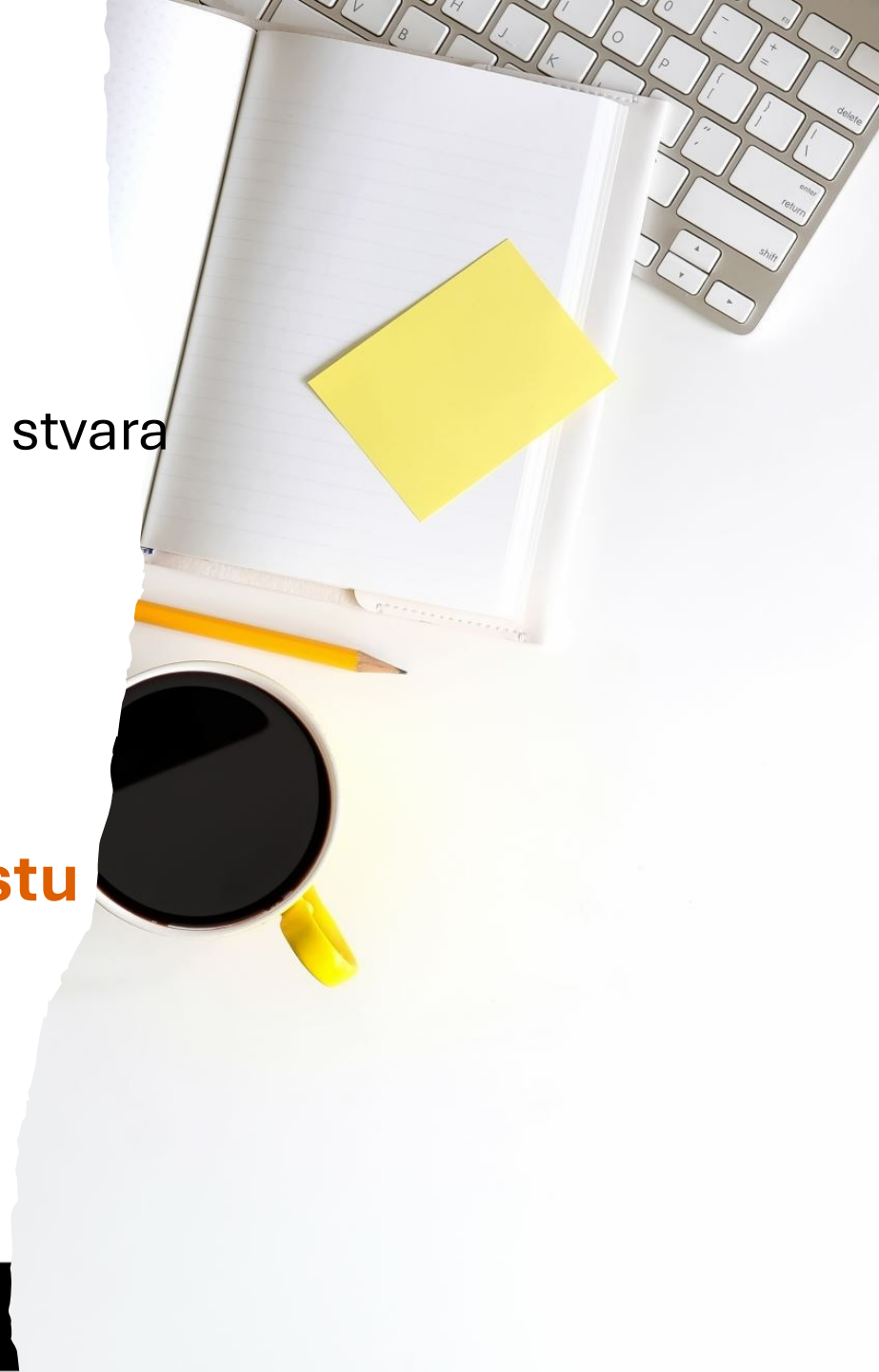
Iz datoteke
Istraživanja
Primjeri

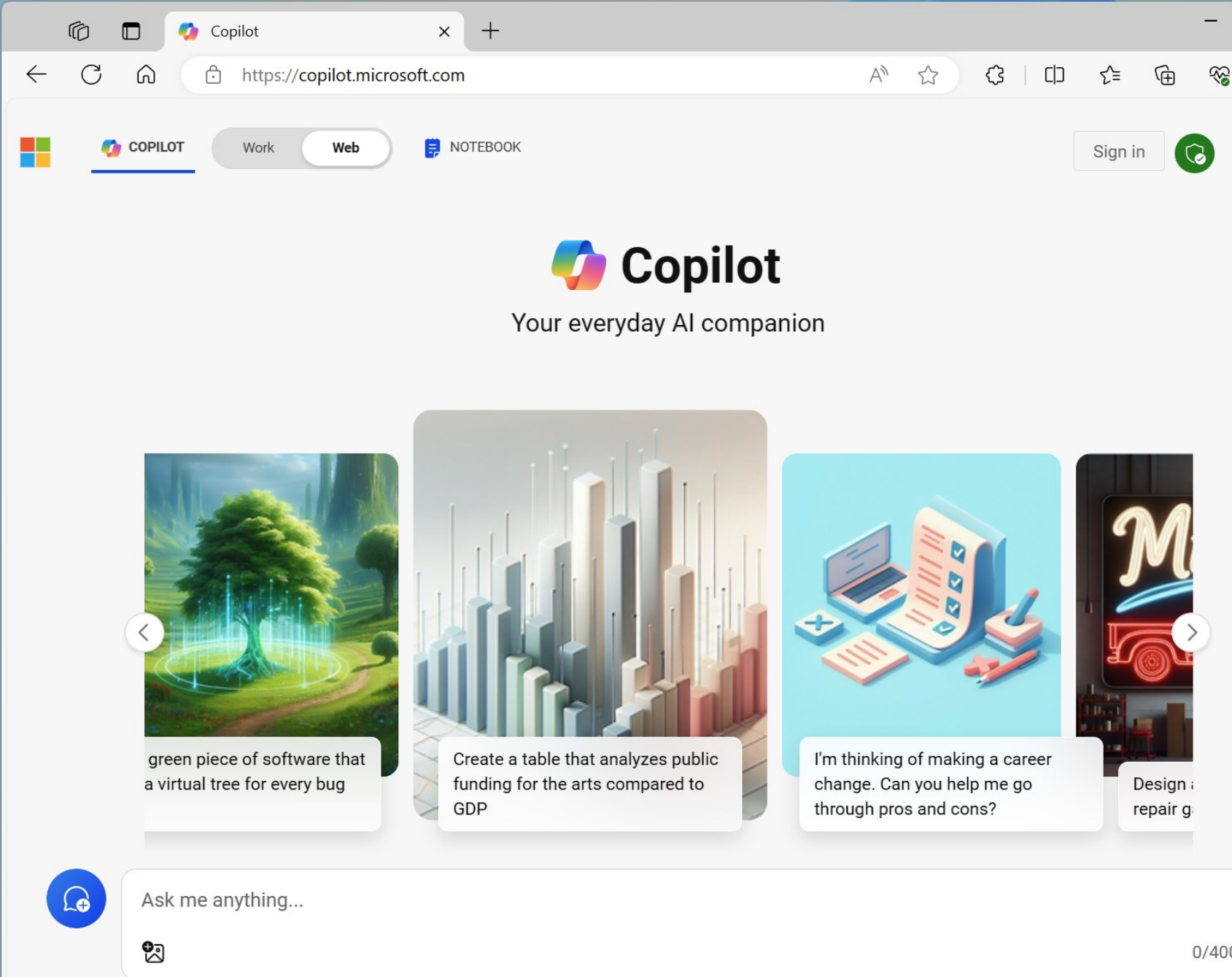
Prompt:

Draft an outline of a training manual about time management. Our audience includes professionals who work in a hybrid environment and constantly need to attend virtual meetings and deadlines. The tone of the document must be friendly and suggestive.

Pravila

- Dajte **jasne** i **sažete** upite
- Eksperimentirajte s **različitim stilovima**
- Dajte **gledište (stajalište)** na temelju kojih Gen UI stvara odgovor:
 - "You are a social media manager writing blog post."
 - "You are MS Excel advisor..."
- Izbjegavajte **nejasnoće** i **prepojednostavljene** promptove
- Izbjegavajte pretpostavke o **prethodnom kontekstu**
- Upoznajte se s **ograničenjima** u radu s promptovima
- Budite **pristojni i znatiželjni**
- Ponavljajte i doradite promptove**
- Vježbajte** pisanje promptova



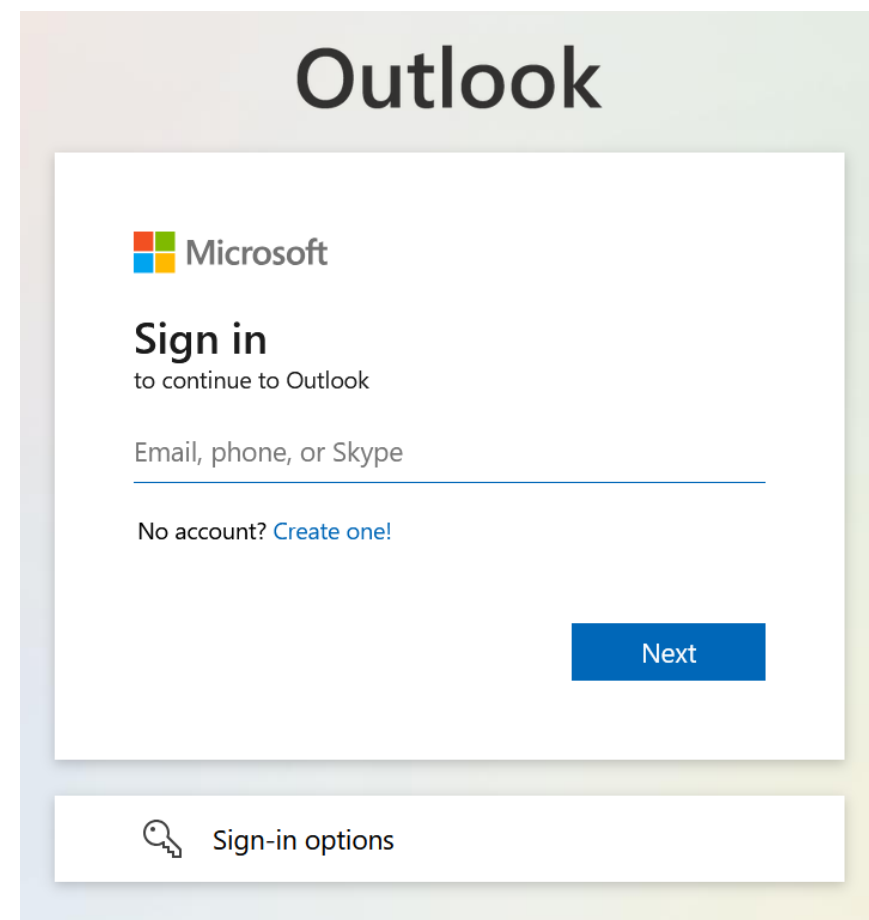


Microsoft Copilot: Pregledavanje weba s umjetnom inteligencijom

- Microsoft Copilot:
 - za odgovaranje na pitanja,
 - stvaranje sadržaja i pretraživanje weba (na poveznici: <https://copilot.microsoft.com>)

Osnove Outlooka 365

- <https://outlook.com/>
- Koristite korisnički račun AAI-a



Sučelje Outlook aplikacije u Office 365

The screenshot shows the Outlook application interface with several red arrows pointing to specific features and labels:

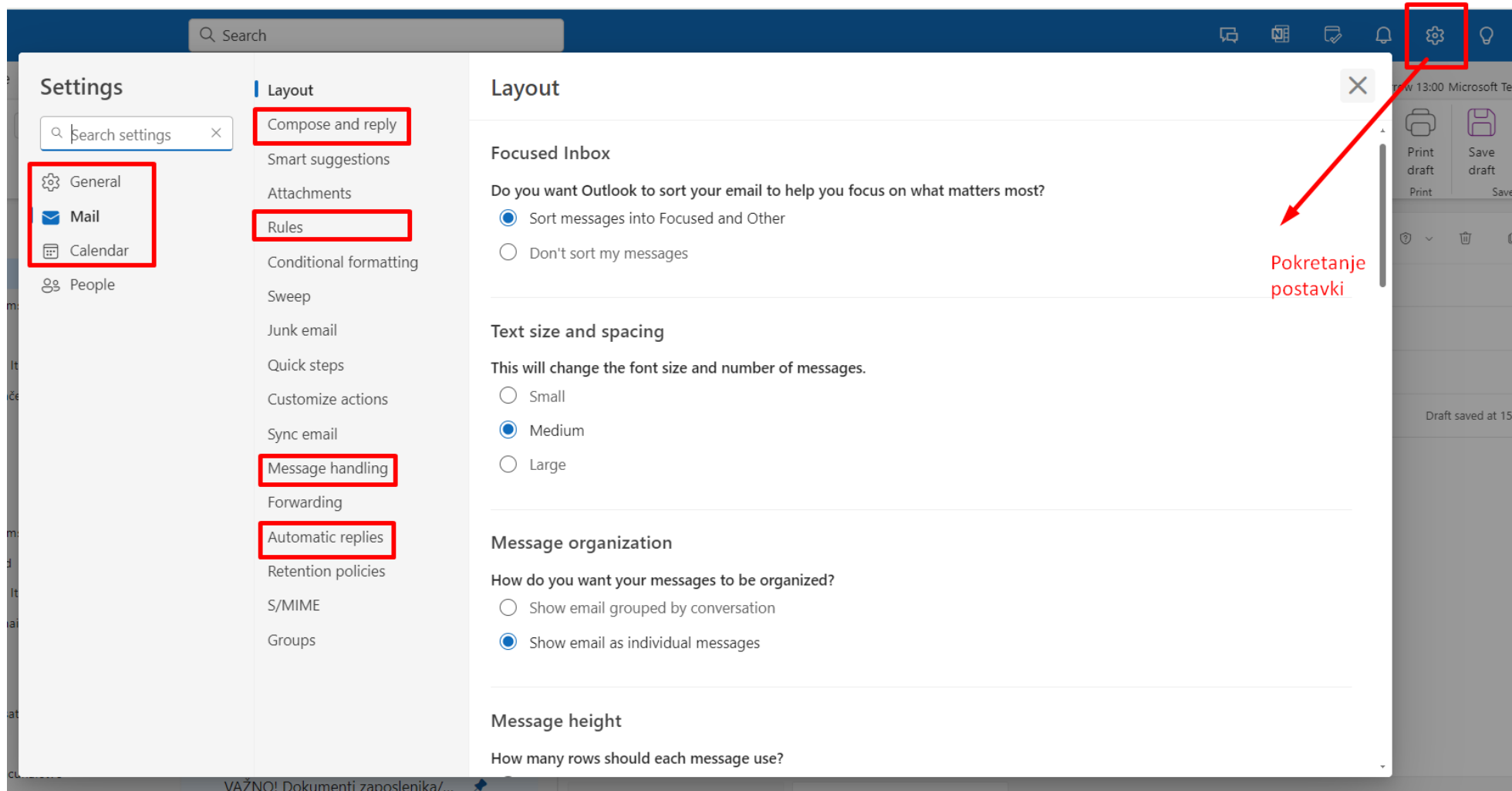
- Kreiranje nove e-mail poruke**: Points to the 'New' button in the ribbon.
- Okno s mapama**: Points to the 'Inbox' folder in the left sidebar.
- Postavke**: Points to the settings gear icon in the top right corner.
- Popis e-mail poruka u odabranoj mapi**: Points to the list of emails in the 'Focused' tab.
- Prostor za čitanje e-mail poruka**: Points to the main content area where an email is being read.

The interface includes a search bar at the top, a ribbon with various action buttons (New, Ignore, Block, Delete, Archive, Report, Reply, Forward, Meeting, Sweep, Move, Rules, Quick steps, Mark all as read, Categorize, Flag, Pin, Snooze, Policy, Print, Discover groups, Undo), and a left sidebar with folders (Favorites, Folders) and a main content area displaying a list of emails and a preview of the selected one.

Kreiranje e-mail poruke

The screenshot displays the Microsoft Outlook interface. The 'New' button in the Home ribbon is highlighted with a red box. The ribbon below it contains various actions: Ignore, Block, Delete, Archive, Report, Reply, Reply all, Forward, Meeting, Sweep, Move, Rules, Quick steps, Mark all as read, Categorize, Flag, Pin, Snooze, Policy, Print, Discover groups, and Undo. The 'Message' ribbon is also visible, featuring options like Attach file, Link, Signature, Pictures, Emojis, Tables, Apps, Polls, My Templates, Loop components, Dictate, High/Low importance, Sensitivity, Switch to plain text, Print draft, and Save draft. The main content area shows an email list on the left and a 'Send' form on the right. Red arrows point to the following fields in the 'Send' form: 'To' (labeled 'Kome se šalje poruka'), 'Cc' (labeled 'Kome se šalje kopija poruke'), 'Bcc' (labeled 'Kome se šalje skrivena kopija poruke'), 'Add a subject' (labeled 'Predmet poruke'), and the body text area (labeled 'Tijelo poruke'). A signature block is also visible, labeled 'Potpis'.

Postavke Outlooka



Kalendar u Outlooku

The screenshot displays the Outlook calendar interface. A red box highlights the navigation and action icons in the top-left corner, including the calendar icon, 'Calendar new event', 'New', 'Day', 'Work week', 'Week', 'Month', 'Split view', 'Filter', 'Share calendar', and 'Print'.

The main calendar view shows a grid for 2024 October. The current date is Wednesday, October 9th. The calendar includes several events:

- 8:00 Trening (Wednesday, Oct 2)
- 19:00 Strani jezik (Tuesday, Oct 8)
- 8:00 Canceled: Trening (Wednesday, Oct 9)
- 11:15 Ručak i kava lv (Friday, Oct 11)

The right-hand pane shows a detailed view for Wednesday, Oct 9, listing events such as 'Canceled: Trening' (49.3 days), 'Trening' (All day), and 'Trening' (8:00, 7 hrs).

Kalendar u Outlooku –Nova obveza (New event)

The screenshot shows the Outlook 'New event' window. The main form on the left includes a 'Save' button, a dropdown for the calendar 'Calendar (Ines.Vlahovic@algebra.hr)', and a title field 'Add a title'. Below this are fields for 'Invite attendees', date and time (2024-10-09, 16:00 to 16:30), and a 'Make recurring' button. A 'Repeat' dialog box is open on the right, showing the event is set to repeat every 1 week on Wednesdays until April 02, 2025. A pink arrow points from the 'Make recurring' button in the main form to the 'Repeat' dialog box. The background shows a calendar view for Wednesday, October 09, 2024, with a green event block from 16:00 to 16:30.

New event - Calendar

Event Scheduling Assistant

Response options Attendees

Busy 15 minutes before Options

Categorize Private Tags

Scheduling poll FindTime

My Templates My Templates

Send to OneNote Send to OneNote

Save Calendar (Ines.Vlahovic@algebra.hr)

Add a title Teams meeting

Invite attendees Optional

2024-10-09 16:00 to 16:30 Make recurring All day

Search for a room or location In-person event

Type / to insert files and more

Repeat

Start 2024-10-09

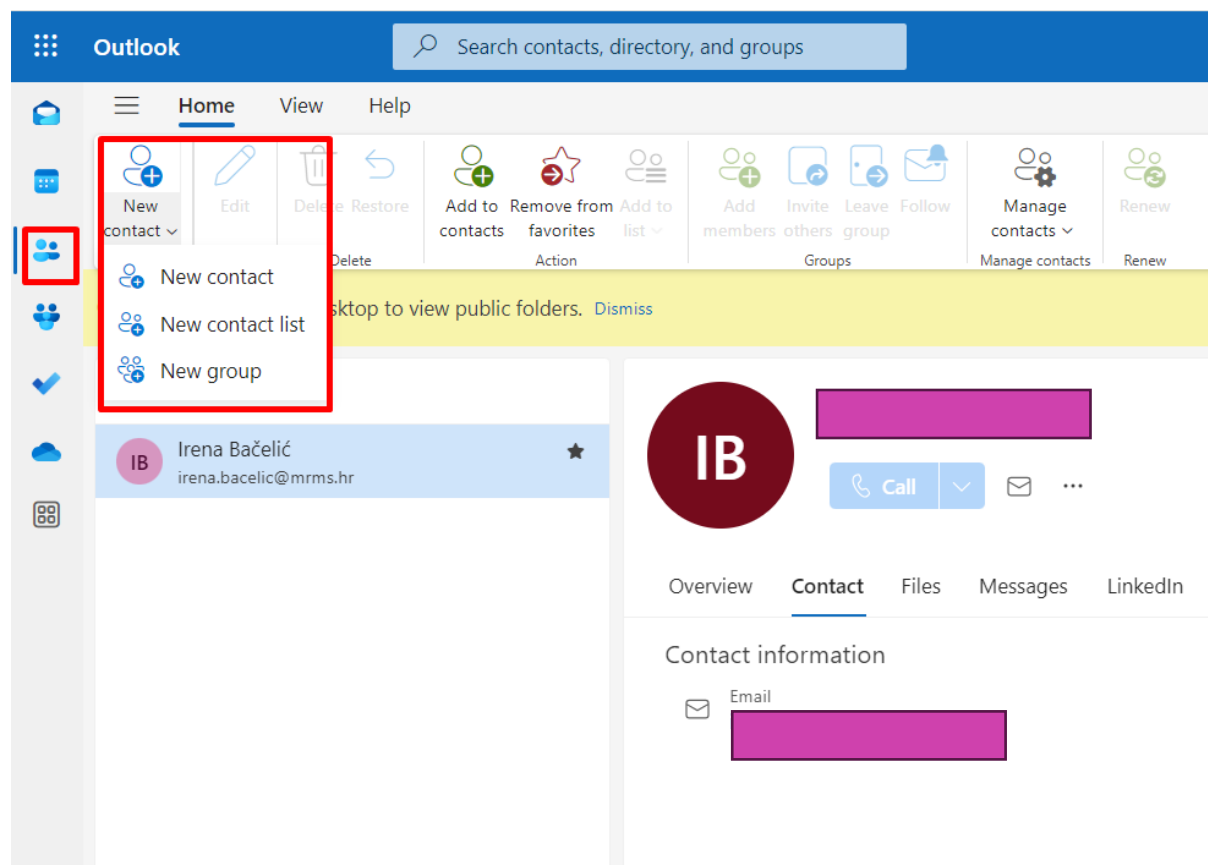
Repeat every 1 week

M T W T F S S

Occurs every Wednesday until Apr 02, 2025 Remove end date

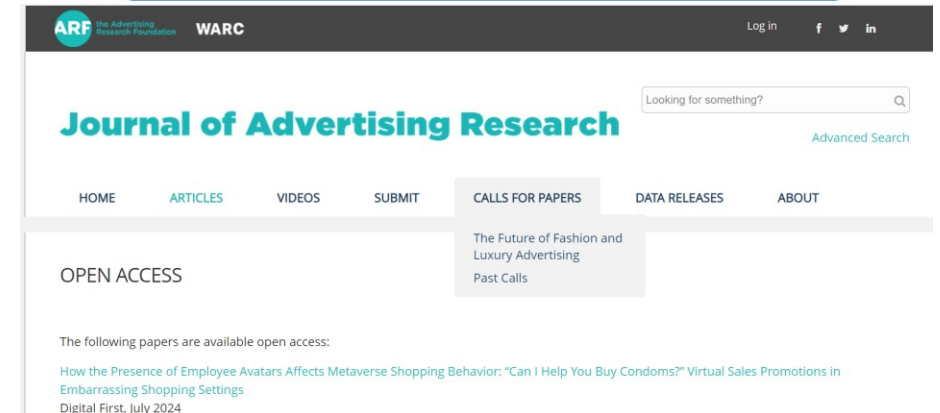
Save Discard Remove

Outlook kontakti



Uloga interneta u Internetskom marketingu 😊

- Doseg marketinga **široj publici** (globalni)
- **Precizno ciljanje specifične skupine korisnika** (SEO, SEM optimizacija)
- **Personalizacija**
- **Mjerenje učinkovitosti** svojih kampanja
- **Niži troškovi i brža prilagodba** kampanja
- Interaktivnost



Quiz

- Što upisujemo u internetski preglednik da bi došli do npr. internetske stranice Večernjeg lista? Kako se zove taj element?
- Što nam znači ekstenzija dokumenta .html? Koje programe možemo koristiti za njihovo pregledavanje?
- Navedite korake potrebne da prikazete mapu puta od Osijeka do Verone!
- U koje polje u e-mail poruci pišemo e-mail adresu ako ne želimo da primatelj zna da smo šefu poslali isti taj mail?
- Kako kreiramo novu obvezu u Outlooku?

Literatura

OBAVEZNA LITERATURA

1. Ružak D. et al. (2020): Internet i rad na mreži, Zagreb: Algebra
2. Banović L., Mirković H. (2016) MS Word – pisanje i obrada teksta, Zagreb: Algebra
3. Microsoft (2020) Office support [Online]. Available at: <https://support.microsoft.com/en-us/office> (Accessed: 10 May 2020)

PREPORUČENA LITERATURA

1. Foulkes, L. (2020) Learn Microsoft Office 2019: A comprehensive guide to getting started with Word, PowerPoint, Excel, Access, and Outlook. Birmingham: Packt Publishing Ltd.

DODATNA LITERATURA

1. Lambert, J. and Frye, C. (2019) Microsoft Office 2019 Step by step. [s.l.]: Pearson Education, Inc.
2. Habraken, J. (2019) Microsoft Office 2019 Inside Out, 1st edition. [s.l.]: Pearson Education, Inc.
3. Hollis Weber, J. (2013) Taming Apache OpenOffice: Getting Started. [s.l.]: Friends of OpenDocument, Inc.



**Hvala na
pažnji!**