

Human Computer Interaction (Hindi mein)

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LLM and HCI Tutorial

Lec37

[Sangeet] Aapka swagat hai aaj ke tutorial mein. Mera naam Ritika Jha hai aur aaj ka tutorial session hai LLMs for Behavior and Persuasion par. Pichle sessions mein humne padha ki HCI aur LLMs ka kya role hai? HCI ka kaam hai latest technology ko humein present karna through apps, websites ya jo bhi technological interface mein hum deal kar rahe hain usmein humein is tarah se technology ko present karna jo hamare liye use karne mein bahut aasan ho, accessible ho aur use use karne mein humein kisi tarah ki samasya na aaye. Jaise hum use dekhein humein samajh aa jaaye ki iska use kaise karna hai. Doosri taraf LLMs ka kaam hai ki woh back end ki saari processing karein. Matlab hamara jo bhi input hai jo hum saadharan bhasha mein input de rahe hain audio mein, text mein ya images mein unko samajhkar unka jawaab usi bhasha mein humein dein jo hamare liye samajhna aasan ho. Toh yeh LLMs ka kaam hai ki woh kaise hamara input leta hai aur usse jo jawaab humein chahiye usko generate karke wapas bhejta hai aur HCI ka kaam hai interface pe use ek aasan tarike se humse input lena aur LLM ka output ek aasan tarike se humein dikhana taaki hum use samajh sakein. Iske bahut saare applications hain. Jaise ki personalization, iska matlab hai ki jaise humein pasand hai waisa hi hamara output ho. Accessibility and inclusion, iska matlab hai ki maan lijiye main sun nahi sakti toh mera jo content output hai usmein audio component nahi hona chahiye. Usmein sirf aisi cheez honi chahiye jo mujhe dekhkar samajh aa jaaye. Multimodal interaction ki jab hum samajhte hain toh hum sirf text se nahi samajhte. Hum chahte hain ki usmein image bhi ho, audio bhi ho, sab kuch ho. Health care and education. Kayi baar log health care sirf is wajah se nahi paa paate kyunki woh samajh nahi paate ki karna kya hai. Education mein bhi aisa hi hai. Language barrier ki wajah se kayi baar cheezein samajhne mein dikkat aati hai. Iske liye LLM aur HCI ka bahut bada role hai ki woh dono saath mein milkar yeh saara content is tarike se humein present karein jo hamare liye samajhna aasan ho. Is tutorial mein hum yeh saari cheezein seekhenge jismein hum shuru karenge behavior aur persuasion ko samajhne se. Uske baad hum samajhenge ki persuasion ke application kya hai? Phir hum dekhenge ki HCI aur behavior saath mein kaise kaam karta hai? Uske baad behavior humein kahan-kahan behavior mein changes chahiye. Uske baad persuasion kaise karte hain? Behavior optimized content kya hota hai? Us tarah ka content generate kaise hota hai? HCI aur behavior ka saath mein kya role hai aur inmein challenges kya hai? Last mein hum future research dekhenge aur kuch ethical considerations dekhenge jo is topic mein hamare saamne hai. Behavior kya hai? Behavior yeh hai ki hamare aaspaas hone waali ghatnaon se hum

kaise react karte hain? Jo bhi hamare aaspaas ho raha hai us par hum kaise react kar rahe hain? Yeh bahut cheezon par depend karta hai. Hamare emotions par, hamare social norms par, hum kis tarah ki society mein reh rahe hain us par. Persuasion hota hai kisi ko manana. Main chahti hoon ki aap woh kaam karein jaisa main chahti hoon waisa kaam karein. Toh uske liye main aapko manaungi. Main aapse kayi baatein kahungi. Woh hota hai persuasion. Aap meri baat maanenge ya nahi maanenge woh aapka behavior hai. Kyunki main aap par kuch effect daalne ki koshish kar rahi hoon aur uska aap par kya effect hota hai woh aapka behavior hai. Toh, yeh hai behavior aur persuasion. Ab persuasion ke kya applications hain? Sabse pehle toh marketers aur businesses. Aaj ki date mein koi bhi product market mein aata hai toh koi bhi businessman yahi chahta hai ki log use khareede. Woh kisi bhi tarah ka product ho. Maan lijiye woh app hai toh woh chahte hain ki usmein users ho. Agar woh koi usable product hai toh log use use karein. Toh woh chahte hain ki woh aisa content banayein. Is tarike se logon ko samjhayein ki agar woh 100 logon ko samjha rahe hain toh usmein se 90 log us cheez ko use karein ya khareedein jisse unhein paise mein fayda ho. Toh agar aisi technology aaye jo is tarah ka content generate karein toh waise businessman ka is cheez mein jo samay vyarth hota hai woh kam hoga aur data ke according decisions honge kyunki yeh saare jo LLMs hain models hain yeh data pe trained hai toh data ke according saare decisions honge aur isse unka profit badhega. Doosra hota hai NGOs. NGO society mein changes laane ki koshish karte hain. Jaise maan lijiye koi NGO yeh samjhana chahta hai ki humein apne aaspaas safai rakhni chahiye. Toh woh iske liye bahut tarah ke poster banayega. Text messages logon ko bhejega. But kya message bhejein ki log is baat ko jald se jald samajhkar apne behavior mein change laayein aur apne aaspaas safai rakhein. Yeh ek bahut badi baat hai. Aur agar hum is cheez ko samajh paayein aur machines ya hamare computers aisa text generate kar paayein toh isse in NGOs ko bahut fayda hoga. Political promotions jab bhi elections hote hain toh jo leaders hote hain woh chahte hain ki vote unhin ko mile. Vote unko milne ke liye woh bahut saare bhashan dete hain, posters banate hain. Ghar-ghar jaake baatein karte hain. But kya baatein karni hai ki log us din se le aakhiri din tak unhein yaad rakhein aur aakhiri din unhin ko vote karein. Yeh ek sawaal hai. Agar data se is sawaal ka jawaab mil jaaye aur yeh LLMs in leaders ko yeh bata paayein ki agar aap apni speech mein yeh yeh baatein bolenge toh aapko zyada se zyada votes milenge toh yeh in leaders ke liye bahut helpful ho sakta hai. Toh persuasion kaise karna hai yeh hum LLMs ko sikha sakte hain aur unki madad se data driven yaani data par aadhaarit decisions lekar uske according hamara text messages jo bhi hum bana rahe hain woh banakar effects la sakte ho. Ab is tarah ke behavior ke kahan-kahan aapko dekhne milta hai? Toh product engagement jaise ki maan lijiye main koi product launch karti hoon toh main chahti hoon ki main usko is tarah se launch karoon ki log uske baare mein baat karein. Content interaction aaj main apni kuch pictures post karoon ya main apna koi content post karoon. Toh main chahti hoon ki log us pe interact karein. Log uske baare mein baatein karein. User retention agar mera koi app hai toh main chahungi ki us pe jo bhi users aa rahe hain woh users lambe samay tak us par bane rahe. Advocacy agar aaj main koi fight lad rahi hoon court mein toh main kya daleelein doon jisse woh case jo hai woh mere hi favor mein aaye. Civic actions ki jaisa ki maine bataya ki hum society mein kuch change laana chahte hain. Koi civic

change laana chahte hain as a society in a whole. Toh usmein humein kya karna hai? Kya baatein bolni hai? Kya poster banenge? Deewaron pe kya messages, kya slogans honge? Jisse woh ek long term effect behavior mein logon ke bana rahe. Yeh bhi samajhna zaroori hai. Iske alawa behavior change, learning and skill growth ki kaise skill growth mein kya cheezein important hai communication mein? Data sharing. Log zyada se zyada data kaise share karein? Agar main entertainment ka content bana rahi hoon toh use log consume kaise karein? Agar main chahti hoon ki log zyada se zyada charity karein. Toh uske liye mujhe kya messages bhejne chahiye ki log zyada se zyada charity mein involve ho. Toh yeh saare applications hain jahan par hum chahte hain ki logon ka behavior change ho. Desired behavior humein logon se mile uske liye hum kuch actions lena chahte hain. Ab HCI ka kaam hai jaise koi app hai uska jo human interface hai uska yeh kaam hai ki woh hamare behavior ko samjhe ki hum kis time us app par aa rahe hain. Us app par kis tarike se deal kar rahe hain. Uske according us app ko chahiye ki woh hamara behavior samajh ke adapt ho aur usi hisaab se humein messages bheje jis hisaab se hum usse interact kar rahe hain. Toh yeh ek bahut bada challenge hai ki kya yeh HCI technology kabhi is cheez ko poori tarah se samajh payegi aur hamare behavior changes ke hisaab se apne aap ko adapt karegi taaki future mein hum uske according chalein. Toh yeh bahut badi opportunity hai HCI technology ke paas ki jo latest technology hai ya jo latest LLMs aa rahe hain jo ki capable hai human behavior ko samajhne aur waise hi behave karne mein kya uska use karke yeh HCI technology hamare saamne aise interfaces la sakti hai jo hamare according change ho, personalized ho aur unse kya insights niklenge jo hamare upar lambe samay par hamare nature par behavior par ya jis tarah se hum koi kaam kar rahe hain us par kuch effect la sake. Next we will start with effective content. Toh effective content. Content sab kuch hi hai. Jo bhi hum dekh rahe hain YouTube pe videos hain, text hain, hamare aaspaas messages hain, posters hain, sab kuch content. But effective content woh hai jo apna kaam kare. Jaise agar koi YouTube video aapko kuch samjhanne ke liye banaya ja raha hai aur aap woh video dekh ke usmein se sach mein kuch samajh gaye toh woh ek effective content hai. Otherwise nahi. Toh jo bhi text hai, image hain, videos hain woh effective kab hongi? Koi text effective tab hoga jab maan lijiye aap ek paragraph padh rahe hain aur us paragraph ko padhte hue aap kahin pe bhi apna attention lose nahi kiye. Aap us paragraph ko poora padhe, samjhe aur woh baat aapko yaad rahi. Toh woh ek effective text content hai. Similarly images. Image mein color coordination bahut matter karta hai ki color theory ke hisaab se woh image aisi honi chahiye ki ek baar hum us image ko dekhein aur woh image humein yaad rahe lambe samay tak. Agar hum padhte samay koi image dekh rahe hain, koi diagram dekh rahe hain toh woh humein exam tak ya jab tak hum use use karein tab tak humein yaad rahe. Image mein color theory aur kaisa woh dikh raha hai woh bahut important hai. Videos mein ek temporal ki time mein information aur add ho jaati hai. Toh usmein humein chahiye ki uski jo story telling hai, video se jo hum samajh rahe hain, uska jo visual hai, uska jo sound hai, sab kuch aisa hona chahiye jo humein effect kare aur hum video se jo samjhe hain, usko apni daily life mein laayein. Toh, yeh hota hai effective content. Doosri cheez hai presentation ki effective content toh hai but usko present kya kaise karna hai toh usmein kuch cheezein bahut important hoti hai jaise timing ki present kab karna hai

context ki woh message hum kahan deliver kar rahe hain aur uska design ki jis tarike se hum present kar rahe hain uska design kya hai? Toh yahan par ek example hai jismein maine ek Zomato ka notification dikhaya hai. Toh yeh jo text hai agar aap is text ko padhein we are not here to remind you to have dinner because how can someone forget about dinner. Toh yeh ek aisa text hai jo aapko appeal karega ki aap khana order kar hi lein. Iska jo notification ka design hai woh ek pop up notification hai taaki jaise hi aapke phone mein woh notification aaye ek pop up sound ho aur aap us notification ko dekhein sahi samay par kyunki yeh dinner ke liye hai toh woh dinner ke samay mein is notification ka aapka dekhna bahut zaroori hai. Toh woh timing important hai. Notification mein hi uska aana bhi important hai. Toh time sahi hona chahiye. Jis tarike se woh information deliver ho rahi hai woh sahi hona chahiye. Aur jo information deliver ho rahi hai jo text hai woh bhi bilkul sahi hona chahiye. Ab aisa content humein kahan milega? Hum kahan dekhein aisa content? Kahan se samjhein ki kaun sa text effect la sakta hai aur kaun sa nahi? Uska sabse achha example hai social media. Social media jaise Twitter, Facebook, Instagram inmein hum likes, shares, comments dekhte hain. Toh aap kisi bhi page ke posts dekhiye. Kuch post par likes zyada hote hain, kuch par kam. Jabki followers utne hi hote hain. Toh kuch post pe logon ka engagement zyada aata hai. Log zyada interact karte hain, kuch par kam. Toh unse hum yeh samajh sakte hain ya LLMs bhi yeh samajh sakte hain agar LLMs ko hum woh data training time par dein ki kya aisa text hai jis par likes zyada aayenge aur kya aisa text hai jis pe likes kam aayenge. Similarly e-commerce website mein yeh sab kuch purchase history ke hisaab se hota hai ki jaise aapne dekha hoga jab aap koi cheez khareedne waale hote hain toh aapko message aata hai ki jisne yeh khareeda tha usne yeh bhi khareeda tha. Maan lijiye aapne ek shirt khareedne waale hain toh usmein neech likha aata hai ki the person who bought this also bought this pant. Toh woh purchase history ki pehle logon ne kya khareeda hai uske hisaab se woh aapko suggestions dete hain. Toh woh bhi ek content hai jo aapko deliver ho raha hai aur woh behavior optimized hai kyunki pehle ke behavior se usne seekha hai ki kya dikhana hai aur wahi aapko dikhaya ja raha hai. Similarly jo streaming services hoti hain jaise Netflix hai toh unmein top picks list aati hai aur aapne pehle kis type ke shows dekhe hain uske basis pe aapko naye suggestions milte hain ki kyunki aapne pehle zyada humorous shows agar dekhe hain toh aage bhi woh aapko humorous shows hi share karega kyunki woh aapka genre samajh gaya hai. Toh is tarike se alag-alag websites pe jo content aapko deliver ho raha hai woh aapke behavior ke liye optimized hai. Taaki 99% cases mein jo content aapko dikhaya jaa raha hai jaise maan lijiye aapko koi show suggest kar rahi hai koi website ki yeh show dekh lijiye toh 90% case mein aap woh show dekh hi lein uske liye woh content us tarike se bana hai. Similarly social media mein har post jo aapko dikhta hai aapke field mein woh isiliye hota hai ki aap us pe like karein. Toh social media ko yeh samajhna bahut zaroori hai ki kaun se actual content pe aap like karenge. Toh uske liye bhi data important hai. Ab jaise yeh ek example hai is slide mein. Yeh Adobe Photoshop ke do images hain jo ki lagbhag same time par post hue the. Dono hi post mein aap dekhenge cats hain. Lekin ek pe jo number of likes hain woh hain 34 aur doosre pe hain 38. Ab hai toh dono mein cats but ek par jo logon ka engagement aaya woh bahut zyada aaya. Doosre mein bahut kam. Similarly right side mein Alaska Airlines ka ek example hai

jismein around the same time do beaches ki photo post hui hai. But left waale mein number of likes is 225 aur right waale mein sirf 45. Aesthetically dono hi image bahut hi sundar hain. Left side mein dono hi image mein cats hain. But jo number of likes hain woh alag-alag hain. Toh iska matlab hai is data mein kuch koi hidden inside chupa hua hai ki kyun ek image par zyada like aaya aur doosre pe kam. Aur yahi humein pata lagana hai ki kab, kis samay, kis jagah par, kya post karne par zyada like aayega. Uske liye data ko samajhna important hai. Is tarah ka data collect karna important hai. Usko dekh ke uske insights nikalna important hai. Aur phir hum chahte hain ki hamare jo LLMs hain woh bhi yeh cheez seekhein aur uske corresponding hi humein outputs dein. Ab yeh pata lagana ki kaun se content se humein jo behavior chahiye maan lijiye humein likes hi chahiye ya maan lijiye humein bahut zyada comments chahiye woh milega. Yeh pata lagana bahut difficult hai. Bahut difficult isliye hai kyunki yeh bahut saari cheezon par depend karta hai. Cultural preferences alag-alag culture ke logon ki jo choices hain woh bahut differ karti hain. Agar India ke kisi ek part mein logon ko red theme bahut achhi lagti hai toh kisi doosre part mein white theme bahut zyada pasand ki jaati hai. Toh color preference ke hisaab se agar dono jagah par mujhe koi image post karni hai aur dono hi jagah par mujhe zyada likes chahiye toh mujhe meri image adapt karni padegi dono culture ke hisaab se. Pehli image mein ho sakta hai mujhe red tones zyada daalne pade taaki log woh pasand karein aur doosri jagah ke liye mujhe usmein white tone zyada daalne padenge taaki log use pasand karein. Age aur gender pe bhi bahut zyada farak padta hai. Jo same image ya text ek bachha aasani se padh lega ya ek bachha enjoy karega padhne mein woh ek bada aadmi enjoy nahi karega. Similarly gender, gender ka bhi bahut farak padta hai text pe. Aap kis tarike se women se baat kar rahe hain aur kis tarah se men se baat kar rahe hain usmein bahut farak hota hai. Similarly platform specific behavior. Ab humein hamare alag-alag platforms pe jo users hain woh bahut alag tarike ke hain. Jaise Instagram pe zyada tar content visuals preferring ke liye hota hai ki woh log visuals ko prefer karte hain. Usmein zyada text ki baat nahi hoti. Text log nahi dekhna pasand karte. Par LinkedIn pe professional insights log dekhna zyada pasand karte hain. Toh wahan par text specific zyada hota hai aur professional insights hum apne posts mein zyada daalte hain tab humein zyada likes milte hain. But Instagram mein images agar zyada achhi hongi toh humein zyada achhe likes milenge. Toh kaun sa content kahan kaise kaam karega iska koi fixed formula nahi hai. Yeh alag-alag cheezon par depend karta hai aur un sabhi cheezon ko samajhna bahut zaroori hai. Usi ka ek example hai ki yeh ek smart insights.com ne yeh insights nikaali thi ki jo hamara jo latest jo generation hai jo GenZ generation hai unko short form videos dekhna bahut achha lagta hai. 15 second videos they are quick ki matlab har 15 second mein content change hota rehna chahiye aur unka ek din mein engagement kahan kis type ke content mein kitna hai woh bhi unhone study kiya tha. Toh unhone bataya tha ki Instagram mein higher education ka engagement sabse zyada aata hai. Iska reason probably yeh ho sakta hai ki Instagram ke users young hote hain. Woh apne profession mein growing phase mein hote hain. Isliye us time par unka higher education mein interest zyada hota hai. Toh isliye Instagram ka yeh insights hai. But kisi doosre platform ka insights bahut alag ho sakta hai. Ab humne samjha ki behavior optimized content kya hai? Content woh hai jisse humein ek specific behavior mile ki like zyada mil rahe

hain ya comments zyada mil rahe hain. But ab aisa data generate karna ki hum aisa data kaise generate karein? Toh aaj tak jo hamare marketers hote hain woh sochte the ki hum kaise branding karenge? Hum kaise posters banayenge? Newspaper ke ads kaise honge? TV ke ads kaise honge ki logon ko woh cheez pasand aaye aur log us cheez ko samjhe, khareede, apni daily life mein use karein. But ab yeh saara process automate ho raha hai using LLMs. Toh inka generation bhi automate ho sakta hai. Toh inke generation ke liye humein kya karna padega? Is tarah ke data ko accumulate karna padega. Usmein se humein patterns extract karne honge. Text ke patterns, image ke patterns, color tone ke patterns. Aur unse hamare LLM mein woh data training data ki tarah use karke LLMs ko sikhana hoga ki see that's how human like content ki insaanon mein is tarah se yeh particular cheez is particular group ko achhi lagti hai. Yeh particular type of text is particular type of group ke liye preferable hai. Is tarah se aur phir woh LLM jaisa hum kahenge uske according hamare liye target specific audience jis tarah ki hamari audience hai uske hisaab se content generate karke humein dega aur woh content hum aage pass karke desired behavior users se le sakte hain. So, jaise ki uh wahi is slide mein likha hai ki funny memes for younger users ki agar hum younger users se baat karna chahte hain, unmein kuch changes laana chahte hain, toh hum shayad fun way mein unko yeh cheez samjhane ki koshish karenge. But agar hum professionals se baat karna chahte hain toh hum ek professional newsletter type ka kuch likhenge jis pe unka dhyan jaaye. Similarly agar humein holiday gifts banane hain, holidays suggest karne hain kisi app ke through logon ko toh hum unki past history ke basis par dekhkar ki unhein kis tarah ke holidays pasand hai, tracking pasand hai, beaches pasand hai, uske hisaab se hum bata sakte hain. Toh, kya content dikhana hai aur usko generate kaise karna hai, yeh hum seekh sakte hain by training aur fine tuning LLMs on such kind of curated data. Ab aata hai behavior simulation. Jo behavior aaj mera hai kisi bhi post ko dekhkar agar main usko artificially us poori pipeline ko banana chahti hoon toh usmein kya components honge yeh samajhna hai. Uska pehla component hota hai communicator ki jo aapko message bhej raha hai. Uske baad hota hai message ki kya message bhej raha hai. Uske baad hota hai channel. Kis channel ke through bhej raha hai? YouTube se bhej raha hai. Instagram, mail, call, text, message kya hai? Receiver yaani ki main jo ki woh content receive kar rahi hai. Aur effect ki woh content receive hua. Maine woh YouTube video dekha. Uske baad mere par uska kya effect hua? Maine usko like kiya, comment kiya, kya kiya? Woh uska effect hai. Toh, yeh poora ek simulation pipeline hai jiske yeh paanch component hai. Iske aage hum dekhenge challenges. Ab is simulation pipeline jo humne abhi dekhi iske jo paanch component hai unhin ko predict karna bahut bada challenge hai ki kya message bhejna hai, kab bhejna hai, kisko bhejna hai, kahan se bhejna hai aur exactly kis audience ko kya dikhana hai. Yeh predict karna to get maximum advantage. Sabse zyada likes paane ke liye yeh paanch sawalon ke jawaab kya honge? Yeh predict karna sabse zyada mushkil hai. Aur yahi hum chahte hain ki hamare AI models hamare liye karein. Iske alawa time behavior aur time ka aapas mein bahut bada relation hai. Kuch behavior changes yaani ki kuch baatein hum bahut aasani se maan lete hain ki hum hamare saath koi ek event hota hai aur hamare andar ek behavioral change aa jaata hai. Maan lijiye humne koi ek post dekha aur humne woh post dekh ke like kar diya ya humne woh product

khareed liya. But kuch cheezein instant nahi hoti. Hum woh add baar-baar dekhte hain over the period of time 5 saal tak dekhte rehte hain, dekhte rehte hain. Tab jaakar hum ek decision makeup karte hain ki are yeh yeh cheez ab hum khareed lete hain ya hum isko ek like kar dete hain is tarah ki cheez. Toh kuch cheezein bahut lamba time leti hain effect karne mein. Kuch cheezein bahut kam time mein effect kar deti hai. Is cheez ko samajhna aur iske according hi content user tak pahunchana bahut important hai. Aur isko predict karna bahut bada challenge. Iske alawa virtual reality. Aajkal virtual reality mein hum jo digital cheezein hain jo digital image hain unko real life mein dekh sakte hain. Hamare aaspaas humein dikh sakta hai using the VR cameras. Inko simulate karna. Maan lijiye main exercise shuru karna chahti hoon. Toh agar main VR mein dekh paon ki is exercise ko 3 mahine karne se main 3 mahine baad aisi dikh sakti hoon. Virtual reality mein real khud ka ek real version dekh paon toh mere liye ek bahut bada motivation hoga ki theek hai phir ab main yeh exercise start karti hoon. Toh virtual reality use karke jo LLM ka content hai usko dikhakar behavior change lena yeh bhi ek bahut bada challenge hai aur ek bahut bada technological advancement hoga. Future research ki jo directions hain woh ho sakti hai VR/AR/AI to ka simulation long time change trajectories ke liye ki aaj mere ko VR mein yeh dikhaya gaya uske basis par maine aaj apni life mein koi change kiya. Aaj se ek mahine baad VR mein next step dikhaya gaya. Uske according maine kya change kiya. Isse ek poori ek trajectory ban sakti hai long term mein ki kaise-kaise cheezein hui aur us par mera kya-kya behavioral change aaya. Mujhe kya content deliver hua? Kis tarike se deliver hua? Us par mera kya change tha? Woh change kitne time tak ka tha? Uska kya effect aaya? Is poori ki ek trajectory ban sakti hai aur usko hum study kar sakte hain ki kis cheez ka kya effect aata hai. Uske baad hai ki past, present aur future mein logon ki soch kaise badalti hai. Maan lijiye yeh exercise wala experiment hum 100 logon par karte hain. Ek saal tak karte hain. Toh pehle unki kya soch thi us exercise ko leke? Us moment par kya hai? Aur future mein kya hogi? Ismein jo unki soch mein jo badlaav aaya hai usko hum samajh sakte hain ki humne jo content AI se generate karaya, VR se deliver karaya aur us pe logon ka effect aaya toh long term mein soch mein kya farak aaya woh hum samajh sakte hain. Ab iske bahut saare ethical considerations hain. Jaise ki is tarah ka data jo behavioral data hota hai. Hum ek poore group ko padh rahe hain. Ek group mein bahut saare log hain. Usmein humein bahut saare insight mile ki yeh particular type of text hai jisse yeh log baat maan jaate hain ya yeh log is particular text par bahut like karte hain. Ab uska main koi galat cheez ke liye istemal karoon, same type of text se unko manipulate karoon kuch galat kaam karne ke liye toh woh ek ethical consideration hogi. Fairness and non-discrimination matlab agar main ek group ke liye study kar rahi hoon toh mujhe us group ko fairly study karna hoga. Aisa nahi ho sakta ki main us group ke ek particular group, sub-group yaani maan lijiye gender mein sirf ek group ki study karoon aur generalized content generate kar doon poore group ke liye. Aisa nahi hona chahiye. Agar us group mein 10 tarah ke log hain toh sabka equal representation aana chahiye in the studies. Ensuring privacy and transparency. Agar hum is tarah ka behavioral data social media se lete hain ya kisi bhi app ya website se lete hain toh we need to always, humein yeh hamesha dhyan rakhna chahiye ki hum usmein anonymity rakhein. Kahin par bhi data mein logon ke naam disclose nahi hone chahiye. Aur hamari ki hui

research ya studies se koi bhi aisa consequence aata hai ya koi bhi aisa effect aa jaata hai jo humne nahi socha but woh aa gaya toh uski poori-poori responsibility lena hamari hi zimmedari hai. Cultural sensitivity is tarah ki studies mein kayi baar kuch particular cultural groups ko fayda mil jaata hai kyunki woh zyada represented hote hain society mein aur kuch ignore ho jaate hain kyunki woh society mein represented nahi hote. Toh we as researchers ya jab bhi hum is tarah ki koi study karein, it's our responsibility ki hum sab logon ko equal representation dein us study mein us data collection part mein. Ab humne large language models ki itni saari baat ki. Abhi ke time mein kaun se large language models hain jo aapke use ke liye available hain? Toh unmein hai GPT-4 jo ki daily use aapko mails likhne hain. Aapko koi message bhejna hai ya aap koi newsletter likhna chahte hain, blogs likhna chahte hain unmein aapki help kar sakta hai. Coding mein help kar sakta hai. AI Claude 3 specifically coding ke liye bahut achha hai. Similarly GPT-4 ki tarah Gemini hai Google ka. Then we have Perplexity, DALL-E 3, Mistral AI jo ki open source hai. Aap again face load kar sakte hain. Llama woh bhi open source hai. Phi-3 Microsoft ka SLM hai. Small language model hai. Ismein weights kam hai. Uske baad hai Qwen 1.5. Similarly bahut saare open and close source LLMs aaj available hain market mein jiske web interfaces bhi hain jinko aap interfaces ke through bhi use kar sakte hain aur jo open source hain unke weights aapko Hugging Face jaise platforms par available hain. Aap unko apni local machine mein Python ke code se load karke test kar sakte hain ki woh kaisa kaam kar rahe hain. Yeh kuch further reading suggestions hain jo aap padh sakte hain samajhne ke liye ki behavior aur LLMs saath mein kya-kya kar sakte hain aur kaise-kaise LLM ko data diya ja raha hai fine tune hone ke liye taaki woh behavior ke applications mein ya content generate karein aur hum use use kar paayein. Now let's move ahead with the demo session. Toh abhi humne yeh khola hai chat.openai.com. Ismein ab hum kuch try outs karenge jo abhi humne seekha usse related. Toh start hum simple hi se karte hain. Hi, how is it going? Ab jaisa ki maine aapko bataya tha ki in ChatGPTs ko hum hamare use case ke hisaab se change kar sakte hain. Bahut saari cheezein sirf prompt ya inke system settings mein change karne se hi ho jaati hain. Jaise for example mujhe abhi isse koi question poochna hai, main poochungi jiska answer 99% yeh de hi dega. Uske baad main isko customize karungi. Maybe apne nature ke hisaab se ki mujhse jab bhi baat kare is particular nature mein baat kare. Uske baad same question hum inse repeat karenge aur hum dekhenge ki kaise iska response change hota hai. Toh abhi jaise maine ek simple hi message kiya. Ab let's say main isse koi full form poochti hoon. English mein tech industry mein AFK bahut use hota hai. Toh uska full form poochte hain. Is the full form of AFK in tech industry? So isne bata diya AFK typically stands for away from keyboard. Iska full form hota hai away from keyboard aur yeh workplace waghera mein use kiya jaata hai. Jab koi insaan apne keyboard ya apne laptop se door hota hai but usko koi message mil jaata hai kaam se related toh woh yeh kehta hai ki main AFK hoon. Ab hum GPT ko customize karte hain. So let's say customize ChatGPT. So what should ChatGPT call you? Ki woh kya naam bulaye? What do you do? What traits should ChatGPT have? Toh yahan par let me change. So that, ab main GPT ko keh rahi hoon ki jo bhi response mujhe de bahut fun way mein de. Bahut jokingly way mein de like friends jaise friends karte hain aur phir dekhte hain ki iske response mein kya farak padta hai.

Toh jaise ki yahan par kuch option bhi aa rahe hain chatty, witty, straight shooting, encouraging, judgy, etc. Anything else ChatGPT should know about you? Toh ismein aap apni kuch details daal sakte hain ki main ek student hoon ya main ek lawyer hoon. Agar aap daal denge main ek lawyer hoon toh aapko woh zyada legal terms mein answer karega. Waise hi aap apne specific kuch requirements apne baare mein jaise daalenge waise uske according yeh behave karne lagega waisa hi aapko response dega. So iske neeche hai enable for new chats. Matlab ab jab hum naya chat kholenge usse yeh ho jayega. Now I will do a save. Save karne ke baad we will quickly open a new chat session. Aur is session mein ab humne ek new session khol liya. Ismein hum daalenge hi. Theek hai? Toh yeh mujhe kuch response kar raha hai. Iske baad main daalungi what is the full form of AFK. Ab isne mujhe same response kiya hai. AFK ka full form hai away from keyboard. But isne mujhe kuch additional cheezein aur batayi ki tech folks ke liye AFK ka matlab always fixing Kubernetes bhi ho sakta hai. Similarly artificially fabricated knowledge bhi ho sakta hai. All files corrupt bhi ho sakta hai. So isne fun way mein mujhe do-teen aur joke waale full form bataye jo ki sahi full form nahi hai but tech life mein sahi hai aur tech life ke liye ek joke ke barabar hai. So iska behavior ya iska response jaisa maine isko customize kiya uske hisaab se change ho gaya. Ab let's say main isko customize kar doon. Isko delete karke straight shooting. And now I will do a save. And I will quickly start a new chat. Now let me, Hi. Tell me full form of AFK in tech industry. Bas. So when I said that the answer should always be straightforward, it gave me a single line answer. Matlab ek straightforward answer mein ek sentence mein isne answer kar diya jabki pehle iske jo answers the woh thode bade the, teen-chaar sentence mein the. But ab bahut straightforward answer hai toh is tarike se yeh saare models aap customize kar sakte hain as per your requirement. Ab humein yeh dekhna hai ki agar hum isi LLM se kahein ki hamare liye koi behavior optimized content ya text generate karein toh kya yeh kar sakta hai? Toh uske liye pehle hum customization jo humne ki hai usko normal par le aate hain. Save karenge aur ek new chat open karenge. Ab yeh phir se ek normal ChatGPT hai without any customization. Aur ab hum in isse kuch aisa content generate karane ki koshish karte hain jo target specific ho. Let's see. Toh yahan mera target all ho gaya adults aur mujhe ek advertisement slogan chahiye ek toothpaste ke liye. So confidence starts with smile, power up your teeth. Toh yeh adults ke liye hua. Ab agar main same type ka advertisement slogan maangu but is baar kids ke liye. So, tell me a magic bubbles for happy smiles. Toh jo slogan ka jo genre hai woh change ho gaya. Pehle woh adults ke hisaab se tha. Jahan confidence ko importance di gayi. But jab humne woh kids ke liye kiya toh usmein magic, magic bubbles ya magic ki baat hui jo ki kids ko excite karta hai. Toh jaise maine target audience change kiya yeh LLM samajh gaya ki content kaise change karna hai. Toh jahan tak LLM ne samjha hua hai. Basic tak LLM ko pata hai. But agar hum isi task ko bahut achhe tarike se karna chahte hain. Jahan hum 100% sure hona chahte hain ki yeh particular slogan kaam karega. Toh uske liye requirement hai ki hum aur behavior data collect karein jahan par content ke saath uske behavior token ki kaun se content par kitna engagement mila hai kitna response mila hai logon ka woh bhi included ho aur us data se hamare LLM ko fine tune karein tab yahi saare outputs aur zyada refined, better honge. Unki accuracy bahut zyada hogi aur unko use karne se jo hamara expected outcome hai woh aayega.

Abhi jo LLMs hain unke training data mein yeh wala jo content engagement ke tokens hain, engagement ke response hain, woh utne zyada nahi hai. Lekin phir bhi yeh basic level par hamara kaam karta hai. But agar hum aur achhe tarike se zyada accuracy se yahi kaam karna chahte hain, toh hamari requirement hai ki jo bhi open source LLMs humein available hai, unko hum is tarah ke data se fine tune karein aur apna kaam karein. So, yeh bas ek example tha to show that LLMs can do such kind of work. Woh is tarah ke kaam target audience ke hisaab se content generation ka kaam kar sakta hai. HCI ka kaam hai ki is tarah ke generations, is tarah ke content ko humein ek aasan tarike se present karna jisse hum interact kar sakein. Woh VR ke through ho sakta hai. Woh kisi app ke through, kisi website ke through ho sakta hai aur uske according woh apna design adapt kare. Toh yeh humne seekha HCI aur LLM ka interplay behavior ke domain mein. Thank you. [Sangeet]