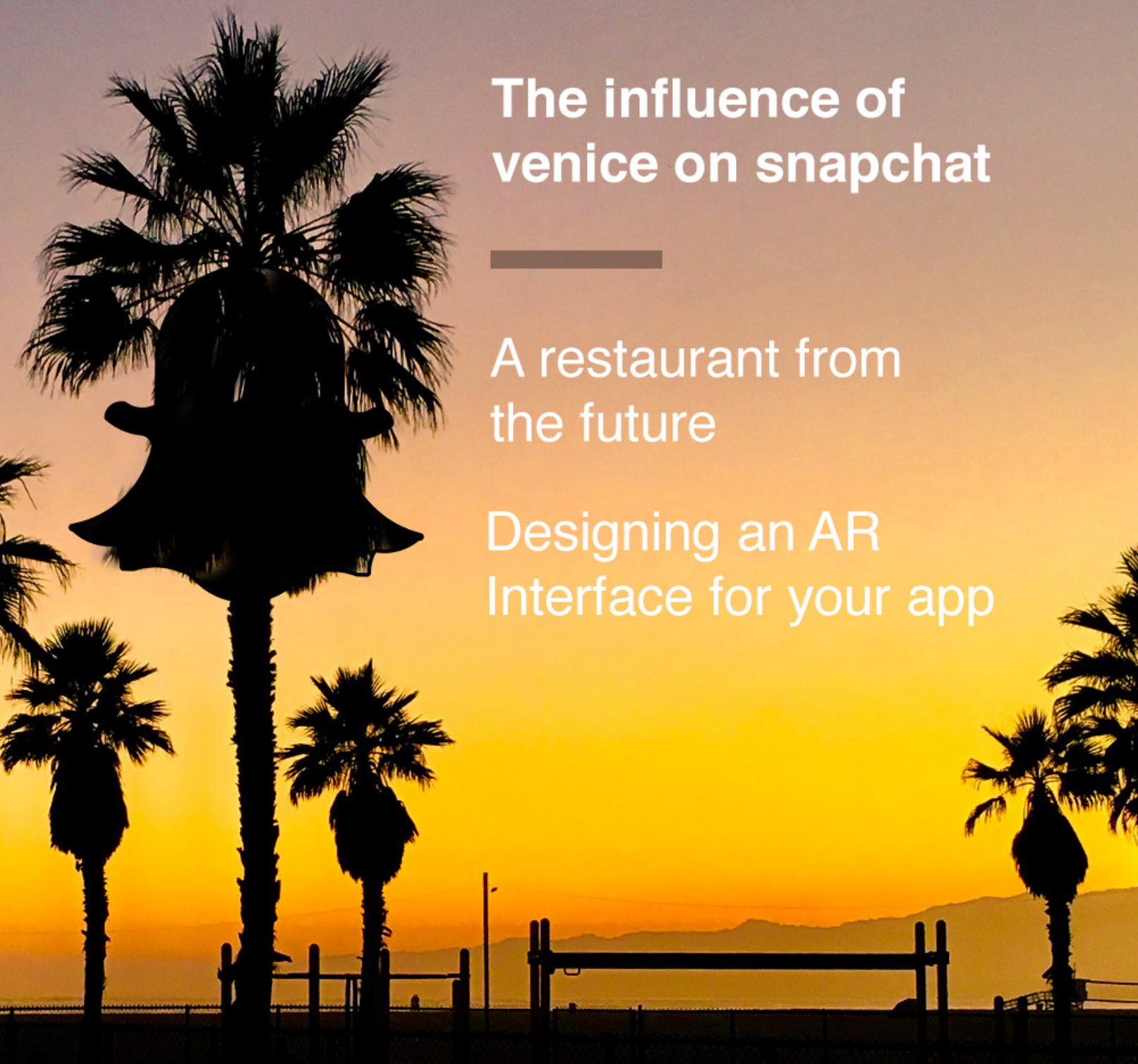
mvdit tech book

July 2017



The influence of venice on snapchat

A restaurant from the future

Designing an AR Interface for your app

Editor's Note

On July 28th 2007, I created the first edition of the mvdit tech book, with the intention of sharing my work and the my tech inspirations in a monthly eZine. This month, the eZine turns ten, and I'm thrilled to have continued to create it for this long.

The mvdit tech book has been a great learning experience for me. What started of as a mere Microsoft word document, ultimately led me to get a deep understanding about page layout design; Designing the covers for the eZine made me Photoshop literate and researching for the monthly quizzes turned me into avid tech quizzer. Along the way, the eZine also got some readers, who've stuck around and appreciated the efforts. Thank you for that! Your feedback has been a great motivation to keep improving the eZine, and I hope to continue doing that.

I hope you enjoy reading this edition of the eZine just as much you've done in the past ten years.

To many more decades of mvdit tech book!
Vidit Bhargava

"If you do something and it turns out pretty good, then you should go do something else wonderful, not dwell on it for too long. Just figure out what's next."

- Steve Jobs

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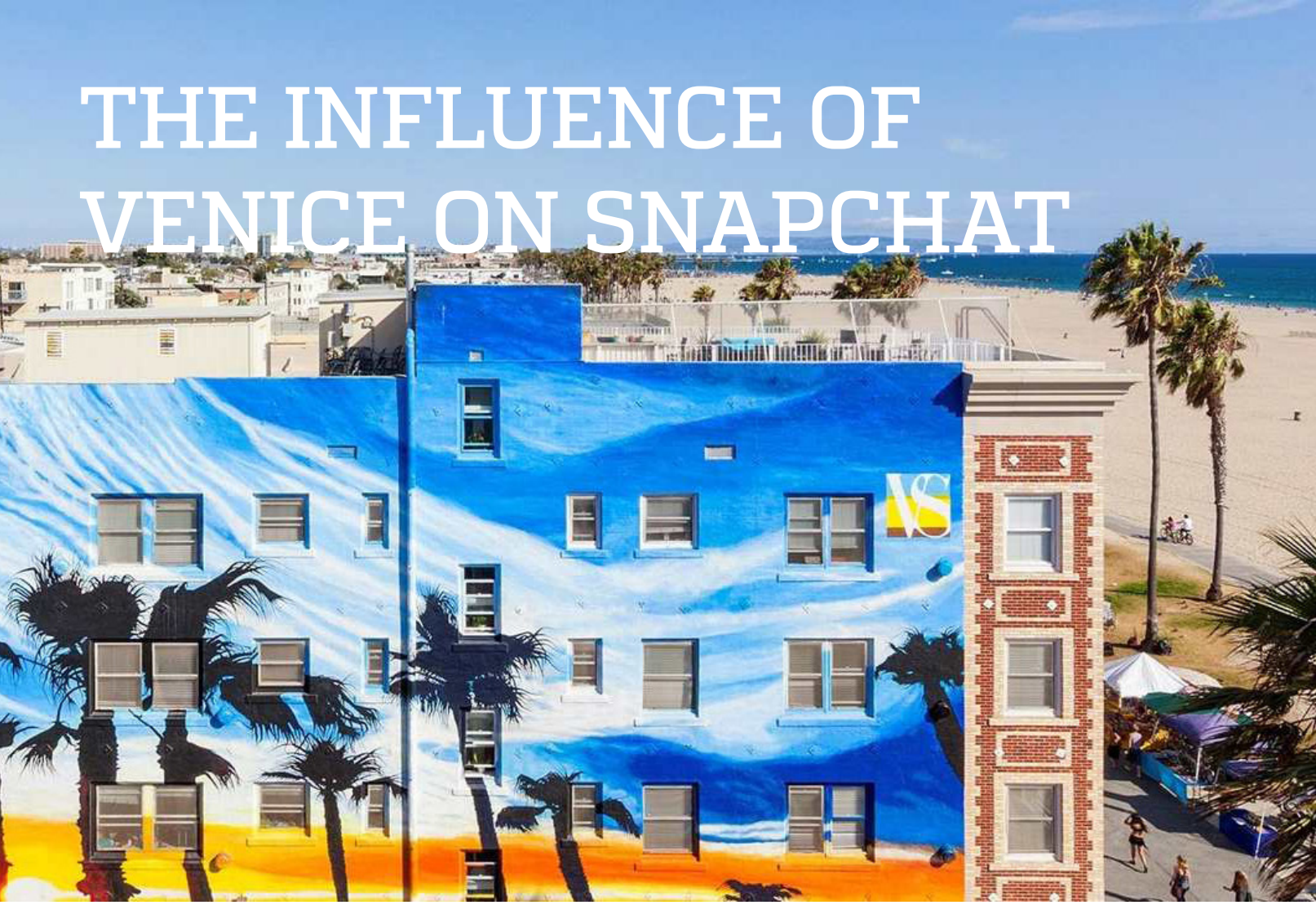
THE INFLUENCE OF VENICE ON SNAPCHAT



Vidit Bhargava

On a recent vacation to Venice, California, I had stumbled upon Snapchat's old headquarters on Venice Beach. It was a white house with a blue rooftop that just blended in with the rest of the neighbourhood's building. Also, I found the unique vibe and culture of Venice beach to be a good opportunity to understand what influences snapchat's unique experience, and also to understand what design means to Venice and what drives the popular culture at the famed beach.

One of the things I've noticed is that Snapchat is an extremely culture driven company. There app's design and graphics are very opinionated and while their user flow may have some issues, there's a distinctive colour palette followed and a unique visual styling followed by the app. Venice Beach has a strong influence on the design, just roaming on the boardwalk, I felt if there's anywhere that snapchat felt home, it was this place, it's a perfect playground for snapchat's use cases and a great inspiration board for anyone starting to design at snapchat.

EPHEMERAL CONTENT

Snapchat stories on the Venice Beach would be the best representation of the concept; ephemeral and there's always something new to share.

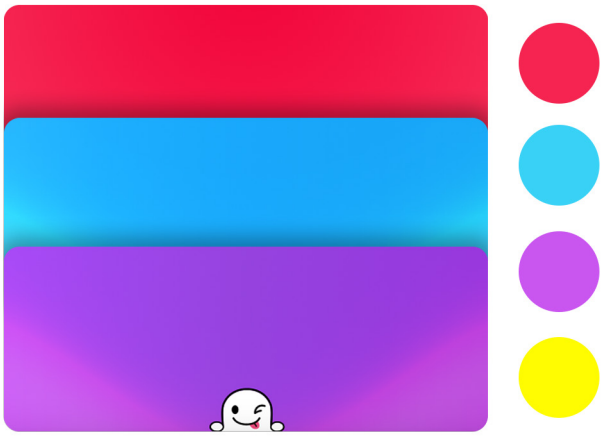
Venice Beach famous for it's eccentricities has a bunch of activities that happen every day, these *events* are short and fun, they gather your attention for a while but hours later there's something else happening that gathers your attention.

This is just the kind of content that fits into the Snapchat narrative of photos, videos and stories being ephemeral. If I look at these events as a locale and not a tourist, none of these events would capture my attention for a long time, because there's so much happening everyday.

In fact this translates not just to the events but to the pop-up shops, that sell all the interesting goods near the beach. Even these shops keep changing over the course of the day. There's very little at Venice beach that feels permanent and Snapchat's inclination towards the ephemerality of the content shared by it's users doesn't feel coincidental.

VISUAL STYLING

If you were to walk a bit further towards the city from the boardwalk, you'd be greated by more permanent shops, a ton of street art and a few residences. What stands out though is the colour. The street art, the shops and even sometimes the rooftops, they hall have this distinctive colour palette that it strikes out. Move a little further towards the beach, and even the beach sheds are soaked in the vibrant colours of Venice Beach.



A look at the snapchat app, and the choice of colours strikes as familiar to much of what's used in the neighbourhood.Moreover, there's this scrappy vibe to Venice Beach which doesn't feel super-artistic and is far from minimalism. There's a lot of street art, a lot of scrappy-hacked together art around the beach. A glance at the sticker dock in snapchat or at the newly released map feature or even the integration of bit-moji into the app, and you'll see the scrappy, hacked together feel seep into the app.

POP UP SHOPS

SNAP'S WAY OF SELLING SPECTACLES

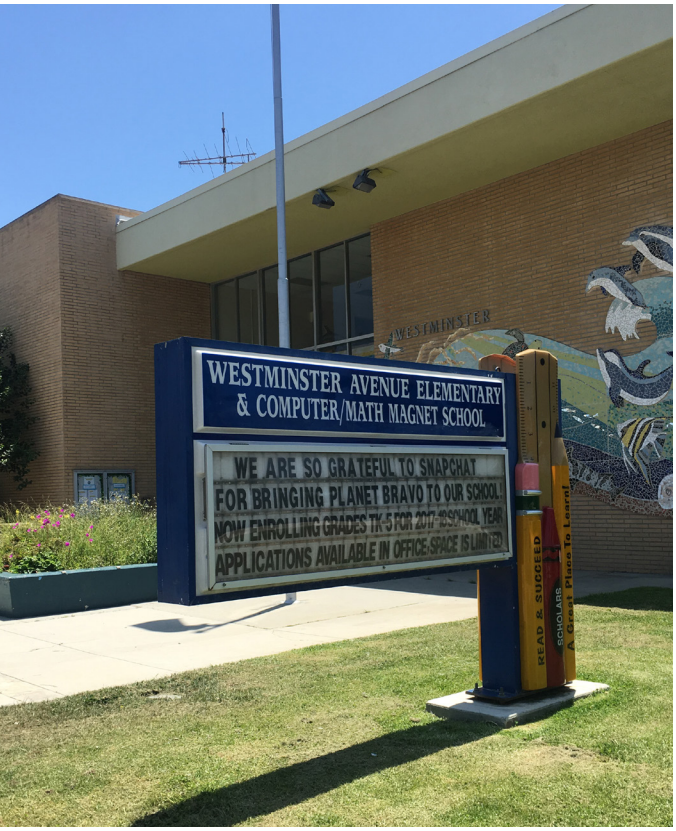
Coming back to the shops near the boardwalk there's one by Snapchat as well. And it's just a garage which holds a claw machine to get a snapchat ghost toy and a snapbot vending machine that lets you try the Snap spectacles. It's just a little better than a pop-up stall on the boardwalk opposite it. If anyone were to make them shut their garage, the snapbot and the claw machine would find home very easily on the boardwalk.

Now, Snapchat's could have sold their glasses online from day one. But they set up these snapbot pop-up booths which'd turn up at random places around the city And soon be gone. If that reminds you of how the Venice Beach's pop up stalls, you aren't alone. These snapbot are based on a similar, even if a little more permanent, concept. Much like the Venice Beach stalls, you'll probably not see a random snapbot lurking around at the same spot.

CONTRIBUTIONS

THE INFLUENCE OF SNAPCHAT ON VENICE BEACH.

But Snapchat doesn't just benefit from the Venice culture, there's a lot that it contributes to the neighbourhood as well.Sometime back earlier this year, Snapchat partnered with an LA education firm called Planet Bravo, to bring computer education to an elementary school in Venice. The Elementary school now thanks Snapchat for this genoristy on the display at the front gate.



But Snapchat's influence has been a bit beyond brining computer education to Venice. It's had an impact on the real estate of the place as well. Snapchat's old headquarters which weren't nothing more than a beautiful blue beach house, are now eclipsed by newer offices which look a lot more like a Silicon Valley office building, and they do sort of standout against the strong colourful vibe of the place and I fear there'll be more startups mushrooming around the neighbourhood. But I hope they'd embrace the Venice culture in a similar way.

Having said that, while Snapchat's offices stand out and can be distinctively seen from far away, they never feel out of place. The company does such a good job at embracing the neighbourhood's culture that it never feels out of place. Much like what Silicon Valley was to companies coming up around the 70s, Venice is to Snapchat. It's a very different culture from Seattle or the SF Bay Area and that's why Snapchat's actions feels different from much of the valley's startups.

Top Stories

from the world of technology in July 2017

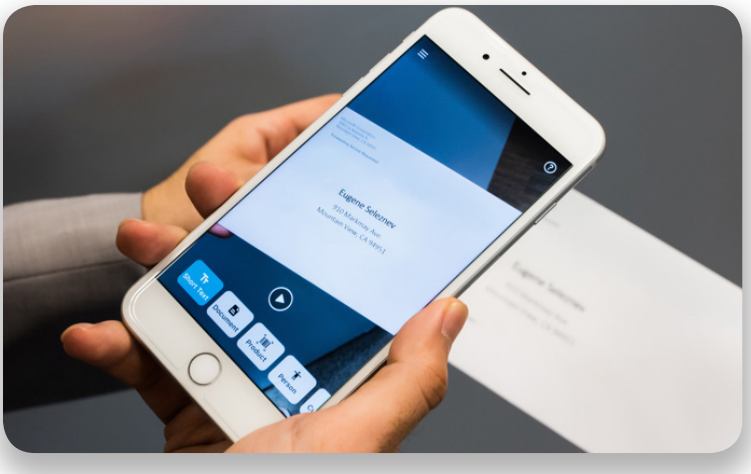
1 Atari's Nostalgia Trip

Following Nintendo's success with the NES Classic Edition, Atari plans to relaunch its own classic console, complete with the wooden casing, called the Ataribox.

The retro gaming console will have the ability to play both the current and classic games. However, Atari isn't just slapping new internals to an old design, they've slightly modernised the Atari 2600, with a slimmer design and modern I/O.

2 Google Glass' Second Life

Once shunned by the early adoptors for being creepy, Google Glass is getting a new life as an Augmented Reality headset for manufacturing facilities, workplaces and medical facilities. With the Enterprise Edition, google glass aims to solve the complex problem of workers having to consult their laptops for minor tasks every now and then. With a glass pod on their safety glasses, the workers can do that work without having to spend down-time on consulting their computers.



3 Seeing AI launches on iPhone

Microsoft first demoed Seeing AI last year at its Build Conference. Using Neural Networks to recognise the objects around a user, the app can assist visually impaired users to help them by describing the scene, or recognise objects by scanning a barcode, it can also recognise the value of US currency notes and coins.

4 Cochlear's smart hearing implant

Apple's teaming up with Cochlear to roll out a "made for iPhone" hearing implant. The Cochlear Nucleus 7 can stream sound directly from an iOS Device to the sound processor.Cochlear claims that the device is a turning point for people with hearing loss, who can now make calls, listen to music and make FaceTime calls, with the sound directly streamed to the implant.

5 Microsoft's fall naming confusion

In recent news, Microsoft had to shut rumours that their "fall update" will be called the "Autumn Update" in UK and India, given how people call the season Autumn instead of Fall. It's an amusing situation for Microsoft, Not only is fall termed differently in different regions, but in the Southern Hemisphere it'll not be the fall season at all! Safe to say naming the update on different seasons is a bit confusing, especially if the product is one of the most popular operating systems in the world.

Restaurant from the future: Eatsa

Vidit Bhargava

The world's first automat, a restaurant where food and drink were served by vending machines was first introduced in Berlin in 1985. The concept of getting food from a vending machine enjoyed a good 80 years or so, until it was eclipsed by fast food chains, like Subway, which had a greater flexibility of food selection and payment options.

However, as if in a revenge plot of sorts, an automat has surfaced in the United States, which aims to disrupt the Fast-food market by combining the flexibility of a counter-preparation model and modern day automation technologies to deliver food faster and cheaper. The experience is as though you were being served food by robots.

The eatsa store in Berkeley, California

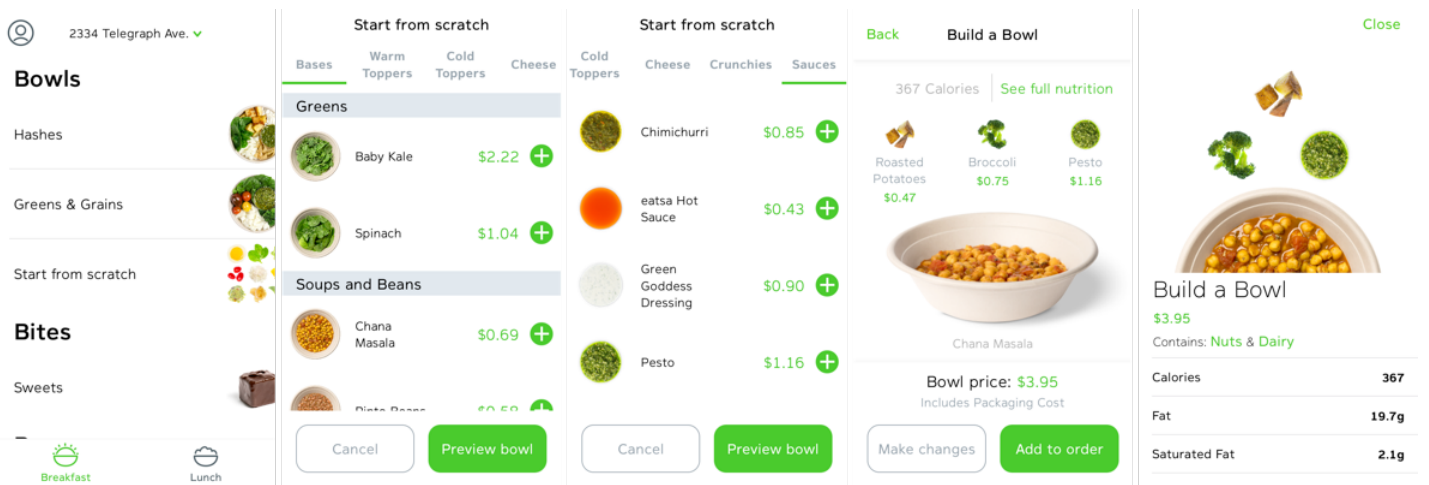
As you walk into an Eatsa, you'll find yourself in a room with an array of iPads lined up to take your order And a grid of cubby-holes which'll host the food you order. It's a futuristic experience, in the sense that there's minimal human interaction involved. You're expected to interact with the iPad, place your order and get your meal, all in a couple of minutes. You're aren't even supposed to know that there are humans preparing the food behind the cubby holes.

Much like how Elves prepared the great feast in the kitchen below the large dining tables of the great hall in the Harry Potter series, and you wouldn't know they were the ones toiling away in the dungeons unless you were Hermione. It's the quickness of the service and the ease of placing an order that really transforms Eatsa's experience and Eatsa's proprietary automation tech is to be credited for it.

The Experience of Ordering food

Food ordering was a relatively simple process. You just need to sign up for Eatsa, pickup your nearest restaurant and begin preparing your meal, either either by selecting a preset food or by "Starting from scratch" and selecting your own ingredients.

I really liked the customisation options here. You can select whatever base you want, and while quinoa is pretty much the central attraction, you can even pick stuff like "Channa Masala" or "Pinto Beans" and then of course there's an assortment of sauces and crunchies to pick from.



Eatsa's offerings are vegetarian (with the exception of eggs, which appear to have a vegetarian status in US) and in general focus on a healthy diet and given that Eatsa's target audience is primarily office-goers or students in need of a quick lunch, these options seem specially lucrative. Moreover, Eatsa's app is intelligent enough to inform about potential allergens and offers filters to remove items which may contain them. This is especially handy for some one like me, who'd otherwise have to check with the staff and rely on their word for such information.

I also liked the attention to detail and the polished user interface of the app. The interactions were fluid, information clearly presented and the experience reliable, whether you're using a kiosk or an app on your iPhone. It feels like a premium experience, at a cost that's even cheaper than your local McDonald's or Subway.

Once the order is placed from the app, and the food ready, your name appears to on one of the cubby-holes, which you can then double tap to unlock and get your food. While the food is still being made by humans, there's a good deal of automation going in the background to get the food ready in a very short span of time. Usually the waiting time for something like this would be 5-6 minutes. But Eatsa's service is a lot quicker than that. If you were placing your order at home / office and going to a store for pickup, you wouldn't really have to wait for it to get ready. You can just walk-over to your cubby hole, pickup your food and get working.

Eatsa uses automation for a fast, efficient and low cost experience.

That's why I feel the experience is futuristic, it eliminates a lot of traditional concepts that'll be in such a restaurant, and ultimately offers food at a very affordable cost. The experience is friction less, extremely convenient and even somewhat /delightful if you are watching this happen for the first time, these factors should really help Eatsa get a foothold in the Fast-food space quickly.

Food Quality

food prepared The food being served is no gourmet fine-dining replacement. It's just a quick and healthy bowl filled with items you'd like to have. It's more in the range of a chipotle or subway than your local fine-dining eatery, and for that it's pretty tasty. It certainly feels like a very wholesome meal.

I especially liked the texture of the roasted potatoes and tofu. They were all well cooked and blended well with the rest of the ingredients.

If I were to eliminate the fact that I was visiting a restaurant that felt straight out of a Jetsons episode, I'd still want to visit the place again, since it provided a pretty delicious lunch.

But here's the thing, Eatsa doesn't have a lot of outlets right now. There are a couple of them in San Francisco, one near UC Berkeley, and a couple of them in New York and Washington DC. Eatsa's only two years old right now, but it'll need to be in a lot more places very soon to be able truly unleash the second coming of Automats.

Designing an AR Experience for your phone

Is a camera view the right interface to pursue augmented reality on our phones?

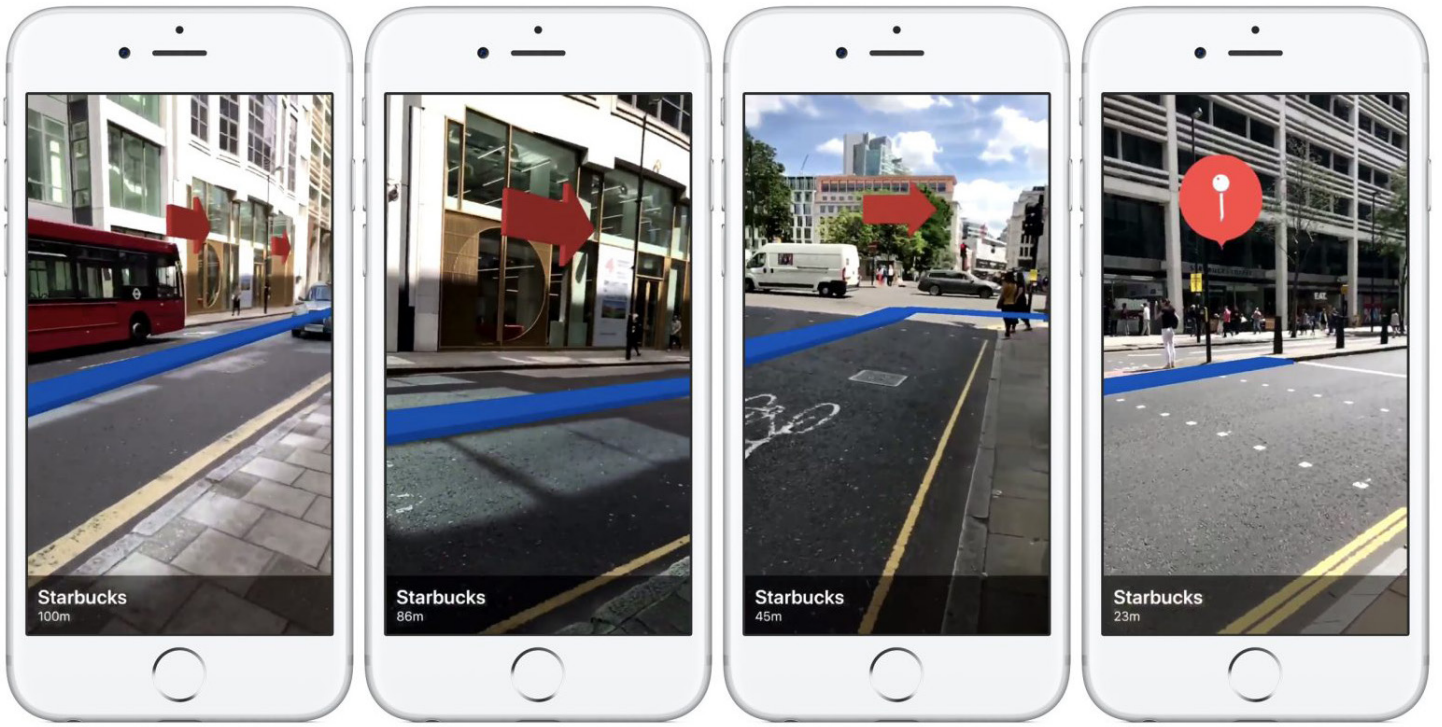
ARKit is gaining lots of popularity but it may not be the right interface for all phone apps that pursue Augmented Reality experiences

Vidit Bhargava

ARKit has to be one of the most talked about iOS features in the recent years. The idea that you can place objects in a real world space and interact in them not only makes for a great demo but also gives life to a new set of applications and games, and to top that Augmented Reality is the talk of the town. Apple's ARKit is easy to implement and comes with support for external gaming engines out of the box. The result? We're already seeing a plethora of app demos months prior to the release of the next iOS version.

Apple's ARKit offers a very polished AR Experience out of the box. Objects respond to the changes in ambient lighting, changes in the proximity to the screen, and size of the surface without much of-work.

Having said that, most of the interaction based demoes involve long interactions with the phone or iPad in a fixed orientation over the surface where the interaction is happening. The problem with a prolonged interaction in such a mode is that, you don't just need to interact with the objects on the screen but also need to balance your display so that it stays focused on the surface at a desirable angle. It's an interesting interface problem to solve, and one that changes with the change in the size of a device.



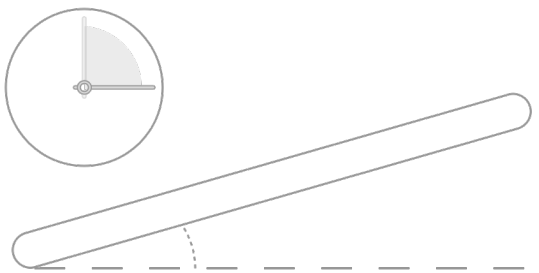
Look at the "Directions with ARKit" demo for example, for turn by turn directions overlayed on a real world environmen, the phone will need to be held in an upright position, while the user walks to his destination. That doesn't really sound like a very healthy interaction. Perhaps it's even a tad too distracting for a person who uses this while driving his car. Moreover is it better than letting the user know when to turn, with a voice alert?

The biggest challenge with these demos is that they're made with the imagination of augmenting the real world environment for the user. Sure, if I'm standing on a turn and an arrow were to appear in front of me, it'd be super helpful. But what ARKit really achieves right now, is to augment the *view of the real world* that appears in front of the user's screen, and for that, it's not exactly helpful to overlay arrows on a camera view. Having said that, It'll be my maps app of choice if the hardware was an AR Smart Glass

With the user interacting with both the background (using the phone's accelerometer to keep the surface in position) and the object appearing on screen, the ideal time for an interaction becomes very short. And this is where it's going to be tricky for a lot of apps to prove their metal because if it's too cumbersome to use the app, the user might altogether abandon it.

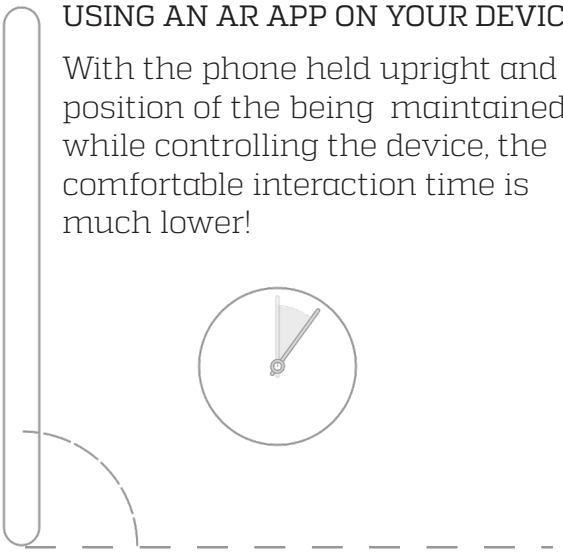
USING A NON-AR APP ON YOUR DEVICE

With a relaxed angle, fewer elements to control and less dependence on the device's position, the comfortable interaction time is longer



USING AN AR APP ON YOUR DEVICE

With the phone held upright and position of the being maintained while controlling the device, the comfortable interaction time is much lower!



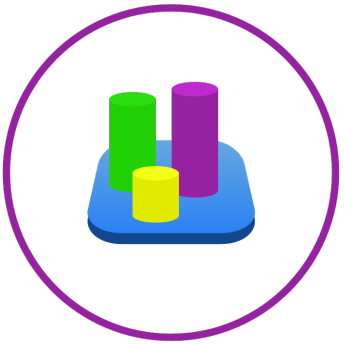
Do we need a camera view for all AR applications?

With the user interacting with both the background (using the phone's accelerometer to keep the surface in position) and the object appearing on screen, the ideal time for an interaction becomes very short. And this is where it's going to be tricky for a lot of apps to prove their metal because if it's too cumbersome to use the app, the user might altogether abandon it.

Google Lens, Google's latest foray into AR, wants the users to point their phone at a place to get more information about it. But is that interaction really needed? Apps can make use of a user's location, the time of the day and context awareness to suggest the information about the nearby places in a smarter manner, than asking the user to do the effort. Ofcourse, Google Lens is a bigger initiative than that, and it makes sense to use a camera view in many of the app's use cases but a lot of demoes that I've seen off the ARKit, could really do some thinking about Augmenting the reality differently.

Audio

Smart Notifications



Objects on screen

Why should AR be limited to making objects float on screen. There could more ways to augment reality, more seamlessly

Moreover, even if we consider a possible future hardware where the overlaying objects would be a more seamless experience, one wonders if inserting an object in a user's view is the only way to improve a person's knowledge of the surrounding. What about a voice interface? Maybe if I enter a mall, a voice could inform me about how busy my favorite coffee shop is. In a lot of places, there doesn't need to be a physical object at all. A mere notification on the watch or an audio interaction with Siri can also achieve the same impact in a lot of cases.

Augmented Reality doesn't really mean slapping an object to your camera view. That's a very shallow definition of augmented reality. What it really means is that the devices that you own are aware of the location, context and your needs and offer you information that's benefitial to you based on your ambient surroundings. There doesn't always need to be a camera to do that.

Getting ready for a future hardware!

A future hardware where the interface is overlayed on a real world with AR Smart Glasses, the ideal interaction would be a lot different. Sure, overlaying an object in front of the user's view would make a lot of sense, but then interacting with the objects will be tricky.

If the primary interaction is gestures, the user will want to do as little work as possible. Because the waving your hands in the air doesn't really feel comfortable, if its done for a long time. Which means that an inserted object would have to be more aware of it's suroundings doing the heavy lifting, instead of the user.

However, it's a controller like with Oculus Rift. The interactions could be prolonged and with a lot more precision. In that case, some of these ARKit demoes make for a great app on the device.

Either way, AR Apps are extremely dependent on the hardware, screen size and interaction models. An AR app on an iPhone shouldn't be designed the same way as an AR app for a an AR Headset And likewise, an AR app for an headset isn't just about slapping objects onto the user's view.

Interesting demoes aside, there's a lot to be done in terms of an augmented reality interface. And it'll be interesting to see a slew of apps coming this fall and all the different interfaces they introduce with them.

Pixel Quiz July 2017

Vidit Bhargava

Q1. X is the official alias for Lockhead Martin's Advanced Development Programs group. The name X originated back in the World War II days, when Lockhead Martin was first given a contract to build fighter jets. X is widely used to describe a group within an organization given a high degree of autonomy and unhampered by bureaucracy, with the task of working on advanced or secret projects.

In the world of technology, we've often seen this technique (X) being used. Most notably, when Steve Jobs established a 50 people lab to develop the first Macintosh. Or more recently the Google X Labs. Simply name X, the name for which comes from a comic strip called "Li'l Abner".

Q2. The name X derives from the from a greek Titan Y, a minimalist graphic of whom also serves as its logo. The logo is a rendition of how we've forever seen Y, being punished to hold up the heavens. X's flagship product was released in 2004, called Jira. Jira, derives its name from the Gojira, the Japanese name for Gozilla, which itself is a reference to Jira's primary competitor at the time Bugzilla. With Jira, the titan that we saw in X's logo, was made to juggle different circular elements instead (since it's a project management tool). Simply identify X.

Q3. Examples stated by the creators of Granthika include :
In Harry Potter and the Prisoner of Azkaban, before Harry and Hermione go back in time, readers learn that Buckbeak is tied to a tree; however when they go back in time, they see something else; In Arthur Conan Doyle's Sherlock Holmes series, Watson's war wound migrates from his shoulder to his leg.

Granthika is a publishing tool, created by Vikram Chandra of the Sacred Games fame. What problem Granthika aim to solve?

Answers to Pixel Quiz June 2017

1. X: Legend of Zelda
Y: Shigeru Miyamoto

2. X: Dell Dude

3. X: Stingray

4. Mechanical Keyboards

5. AIRA helps the visually impaired by narrating their surroundings

Q4. X was founded in 1994 when Paul Mercer, a software developer at Apple, left to form his own company. Known for it's simple navigational structure, X was able to scale from greyscale displays to touch-screens, and existed in the market for close to 16 years. X was one of the popular operating systems in the early 2000s and yet few people ever knew the name. What is X and Which famous product was the OS used for?

Q5. Nerdalize is a cloud computing platform that offers cloud servers for households. You can buy and install an off the shelf server like you'd buy other home appliances. However, there's a bigger picture to installing the server at your house. The company wants to harness the byproducts from the server for another use as well. What dual purpose do these servers solve?