



NIANTIC

Pokémon GO and the Future of Augmented Reality

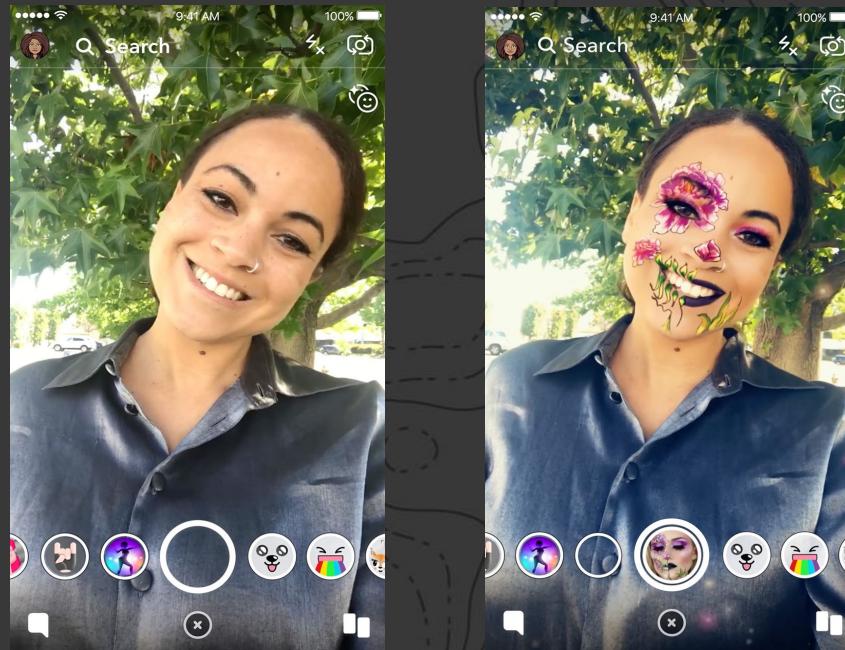
Niniane Wang, Senior Director of Engineering
Christina Quan, Server Engineer



A Refresher on Augmented Reality: Snap

If you've seen Snapchat selfie filters, that's augmented reality.

Snapchat is letting users augment their camera feed and photos to look like a puppy, kitten, zombie, ...

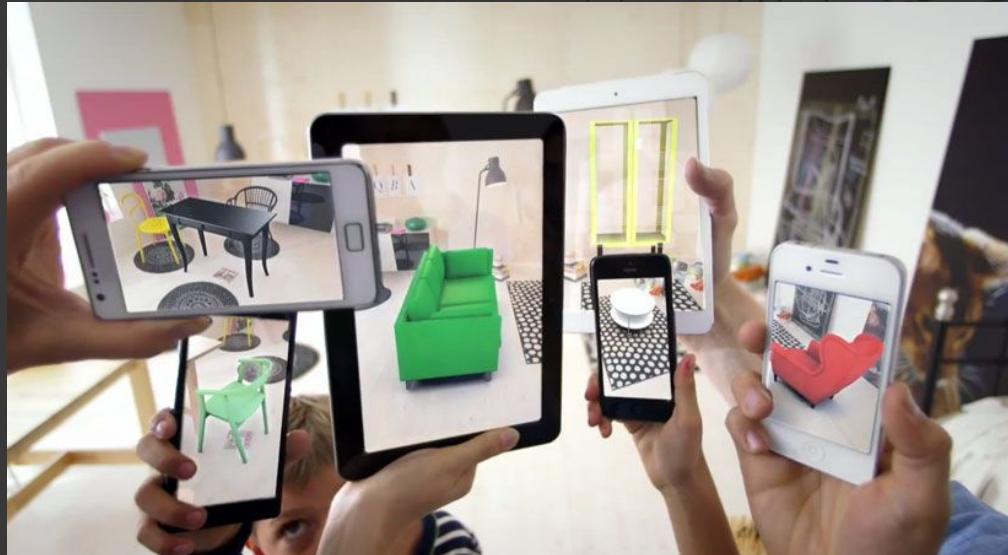




A Refresher on Augmented Reality: IKEA

AR in Interior Design:

IKEA lets customers augment reality by overlaying IKEA furniture onto their real-life home.



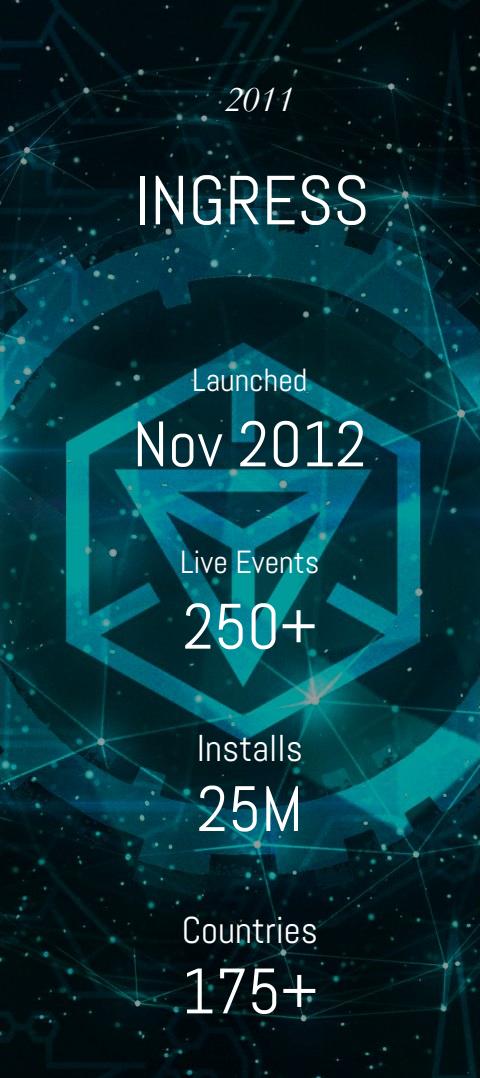
2004

GOOGLE EARTH



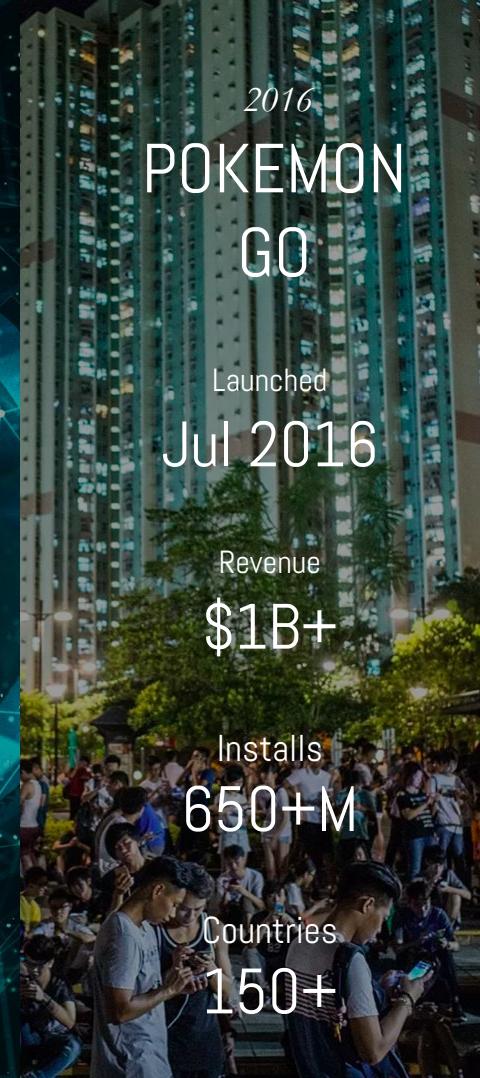
2011

INGRESS



2016

POKEMON GO



Launched

Jul 2016

Revenue

\$1B+

Installs

650+M

Countries

150+

Next

WIZARDS UNITE





Niantic Motto: Adventures on foot with others



Pokémon GO really does encourage more exercise says study



GameCentral Tuesday 14 Mar 2017 10:18 am



Augmenting Reality

Reality can be magical
in its pinnacle moments.

We use technology to
augment **everyday** life
to feel magical.

To do this, the virtual
world needs to feel
closely aligned with the
real world.



Pokémon GO

We want our players to feel like they're really Pokemon Trainers.

To do this, we make the virtual world match reality as closely as possible.



Map and AR evolution over time



Early AR Encounter



2018 AR Encounter





Making Virtual Creatures Match the Locale

When the Pokemon you encounter on your phone matches what you see in the real world, it makes the virtual world more convincing.



Weather

This is a real person's character out in the world.

They're looking out on streets in an actual town or city.

That experience is made more amazing because when it's raining outside, it's raining in the game.

Windy



Snowy



Rainy





Communal Behavior

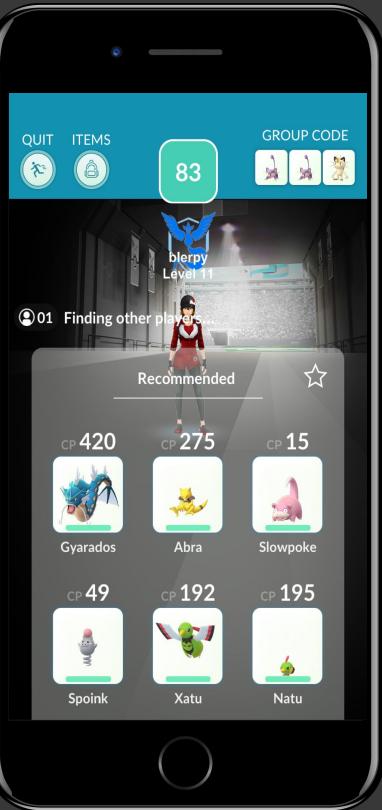
These are actual people playing Pokémon GO.

When one person yells “Pikachu”, hundreds run toward it because everyone shared the same experience.

This makes the Pokémon universe feel more real.



Communal Raids In-Game



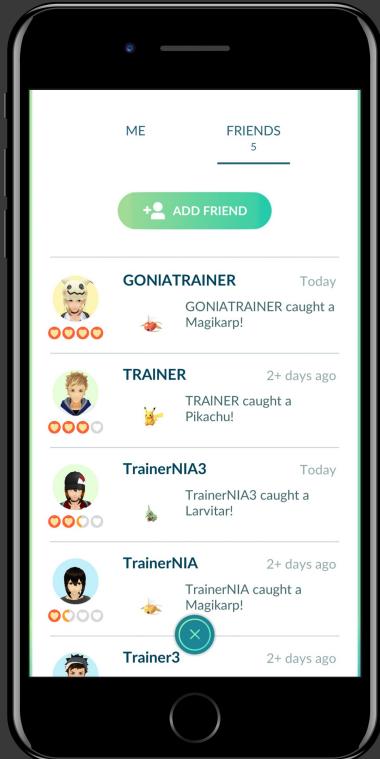


Result of Raids





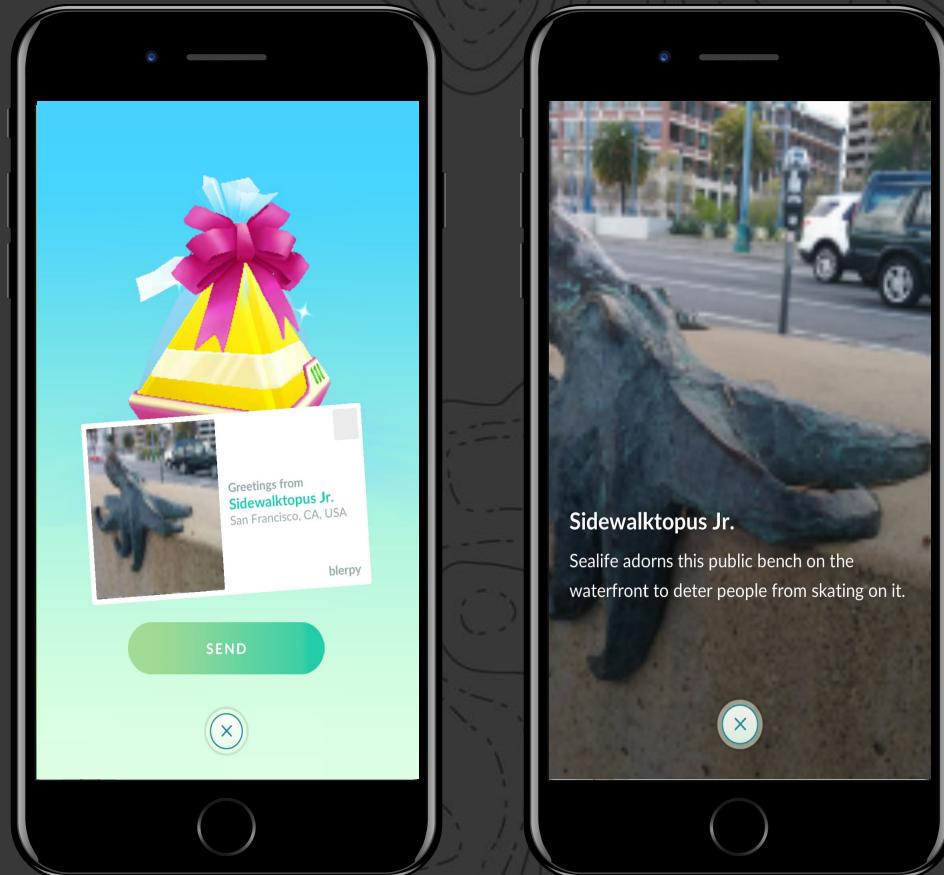
Friends List and Social, the Niantic way



Gifting

Just like how people in the real world like to give each other gifts, we wanted to create a feature that allows players to do that in-game.

Gift boxes were inspired by real-life postcards and allow players to share interesting places they've found with their friends.





Looking to the Future Of AR

We've designed these experiences around people and places.

They've been incredibly popular despite what we'll one day look back on as rudimentary hardware: battery power limitations, requiring the user to look down...





Current State of AR Occlusion

We've been talking about the magic of integrating digital objects into reality.

Here's current-day technology of blending a character into a scene.





The Future: AR Occlusion Research

Now let's depart from existing gameplay and show a new technique.

This research can use a single-lens camera and gather depth from the scene.

Look at how Pikachu blends into the landscape.





The Future: Multiplayer AR

Many current AR experiences are single-user.

The pinnacle experiences in life are shared!

Our AR research allows for multiplayer shared augmented experiences.





Niantic AR Platform





Follow @NianticLabs

Make everyday life magical
with Augmented Reality!