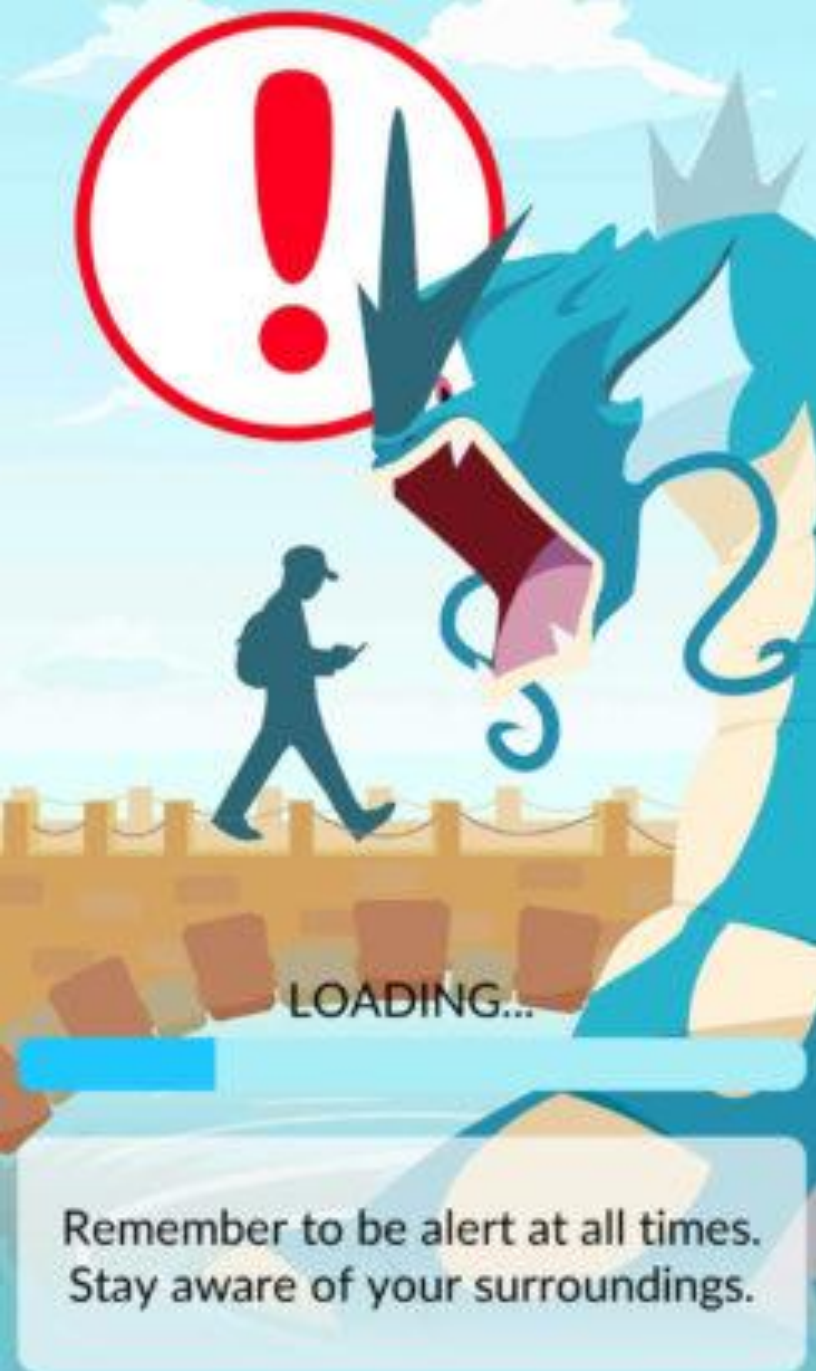




# Augmented Reality

By Martha Nelson  
Digital Literacy Specialist



Don't be a phonbie



March 7, 1973

A man with dark hair, wearing a red polo shirt with a black collar, is shown from the chest up. He has a serious expression and is looking slightly to the right. The background is a dark blue grid with faint white lines and some illegible text or symbols. The overall tone is futuristic or technological.

**THE  
SIX MILLION  
DOLLAR MAN**





# POKÉMON GO



July 6, 2016



# AR - Augmented Reality

Definition: AR is an extra layer that interacts with one's senses of vision, touch, hearing, taste.

Also called mixed reality and computer-mediated reality.

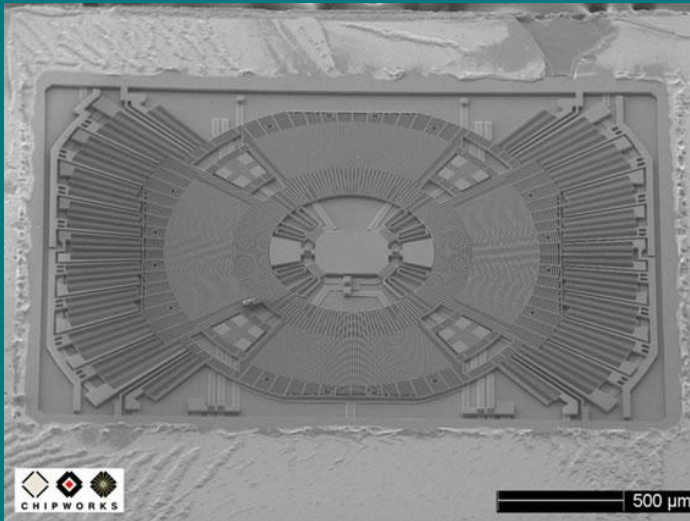
Phones and other devices use:

- Cameras
- MEMS sensors such as accelerometers
- GPS, and solid state compass
- New software

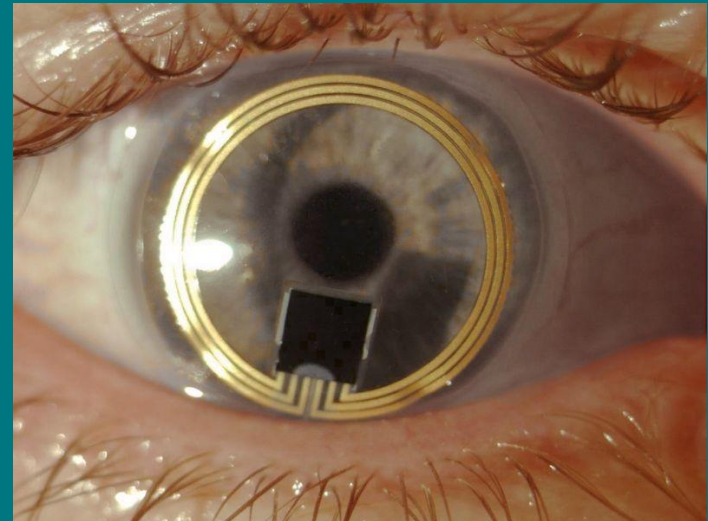


# MEMS sensors

## Micro Electronic Mechanical Systems



An accelerometer in a Nexus 4 phone

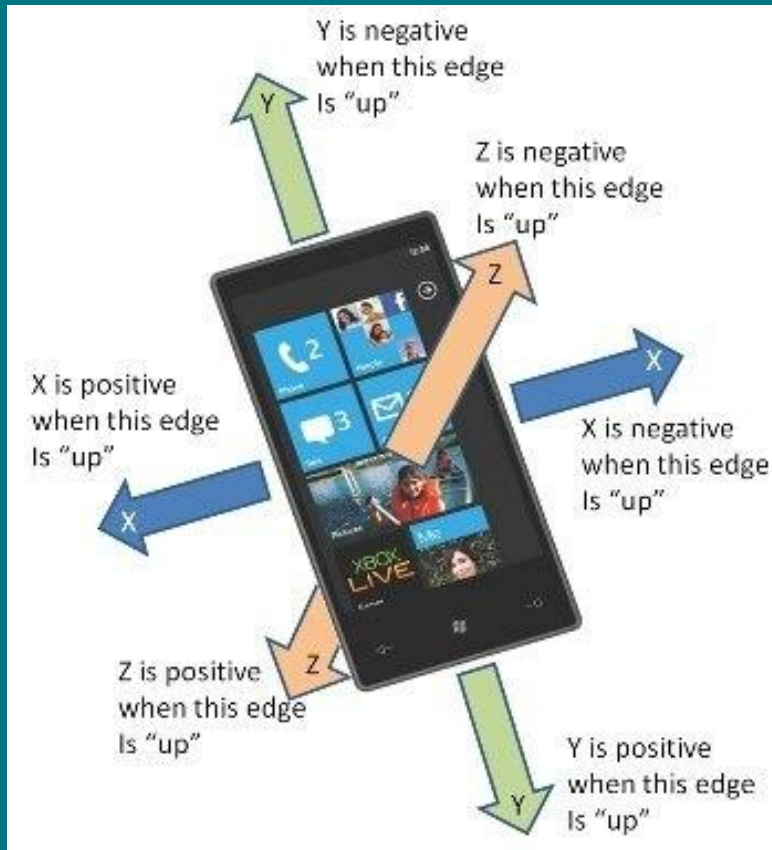


Testing for glaucoma

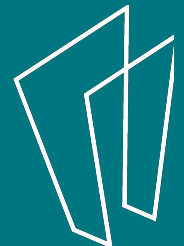
- Nanotechnology
- Very sensitive
- Many uses



# Accelerometer and gyro sensor



- Detects the orientation of the phone. Landscape to portrait, facing up or down.
- Measures linear acceleration of moment.
- Gyro-sensors remove vibrations reducing video shaking.





Magnetometer - compass

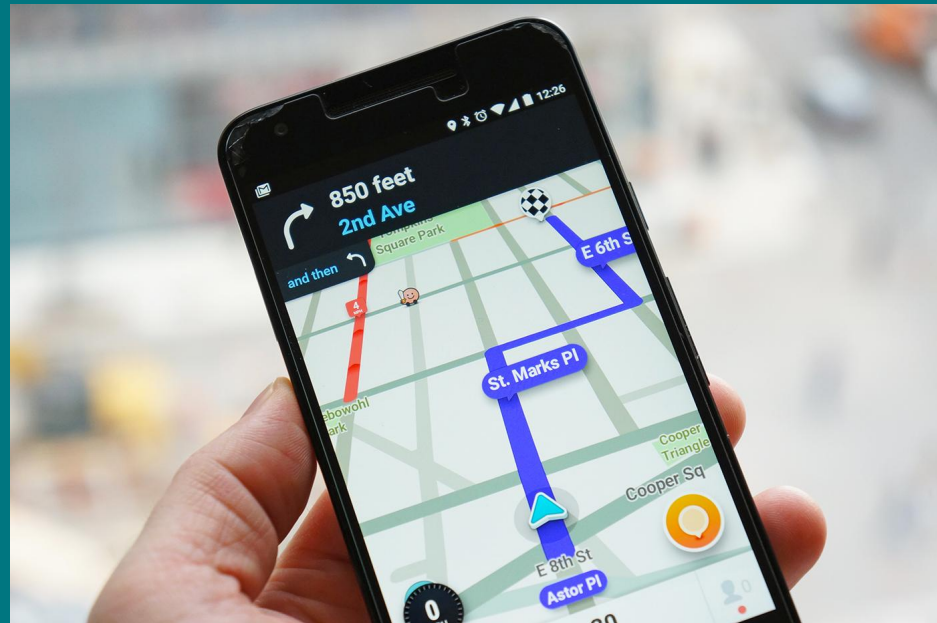
GPS - geopositional system

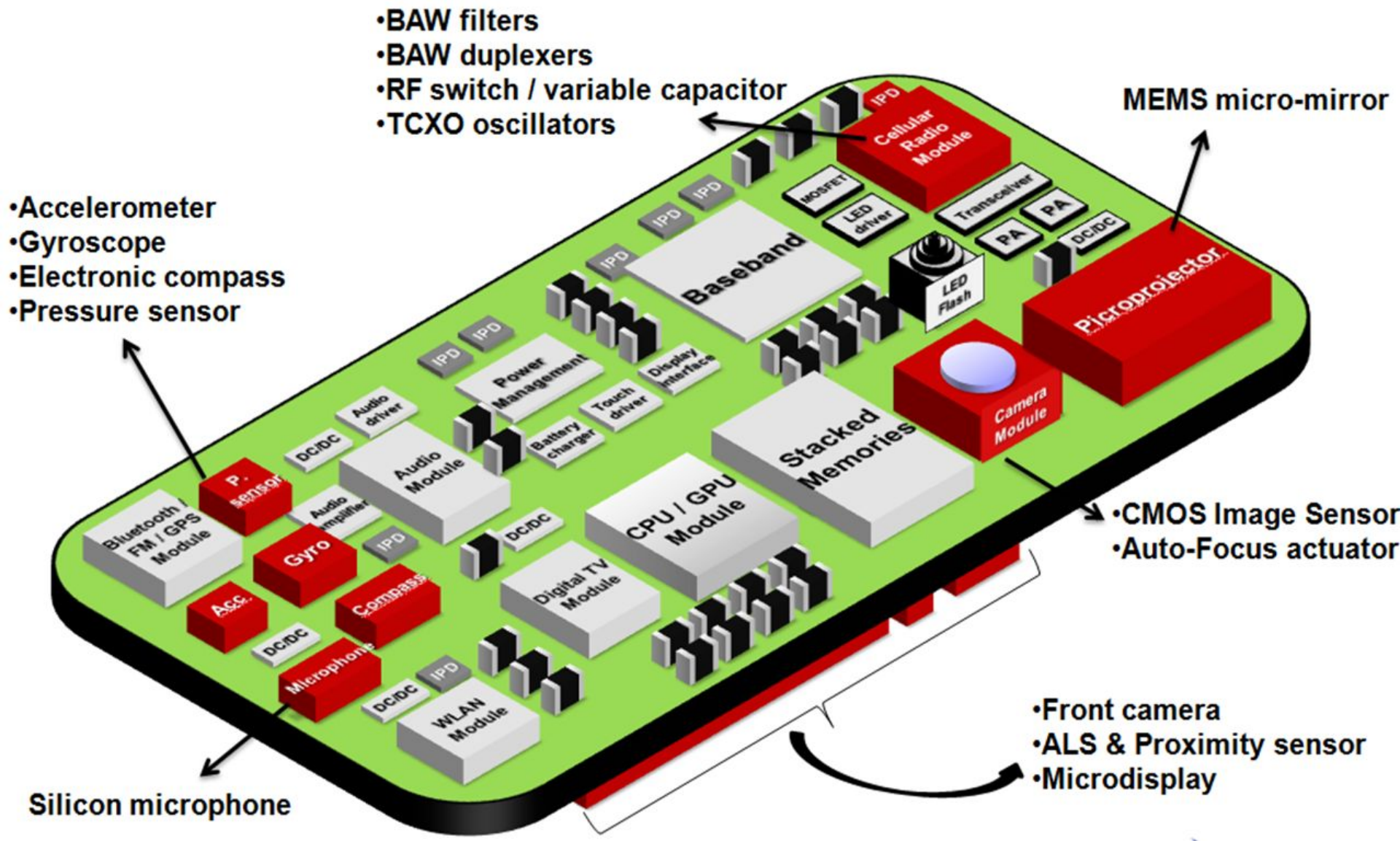
Altimeter - altitude

Barometer - air pressure

Proximity sensor - infrared LED

Ambient Light Sensor - adjusts screen brightness





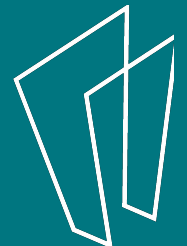
# Requirements for AR apps:

Good graphics & processor

Upgraded screen

Recommended:

- iOS 11 for Apple devices
- Android devices with Lens





# What can we do with AR?

Measure things

Play games

Make silly pictures and movies

View stars and satellites

Identify birds and plants



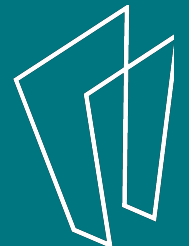




**iolo**  
iolo.com



# AI - Artificial Intelligence



# GOOGLE ASSISTANT MAKING APPOINTMENTS THROUGH PHONECALL

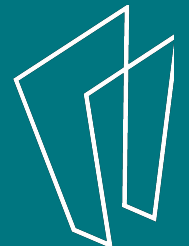


*"Do you have anything between  
10 am and 12 pm?"*



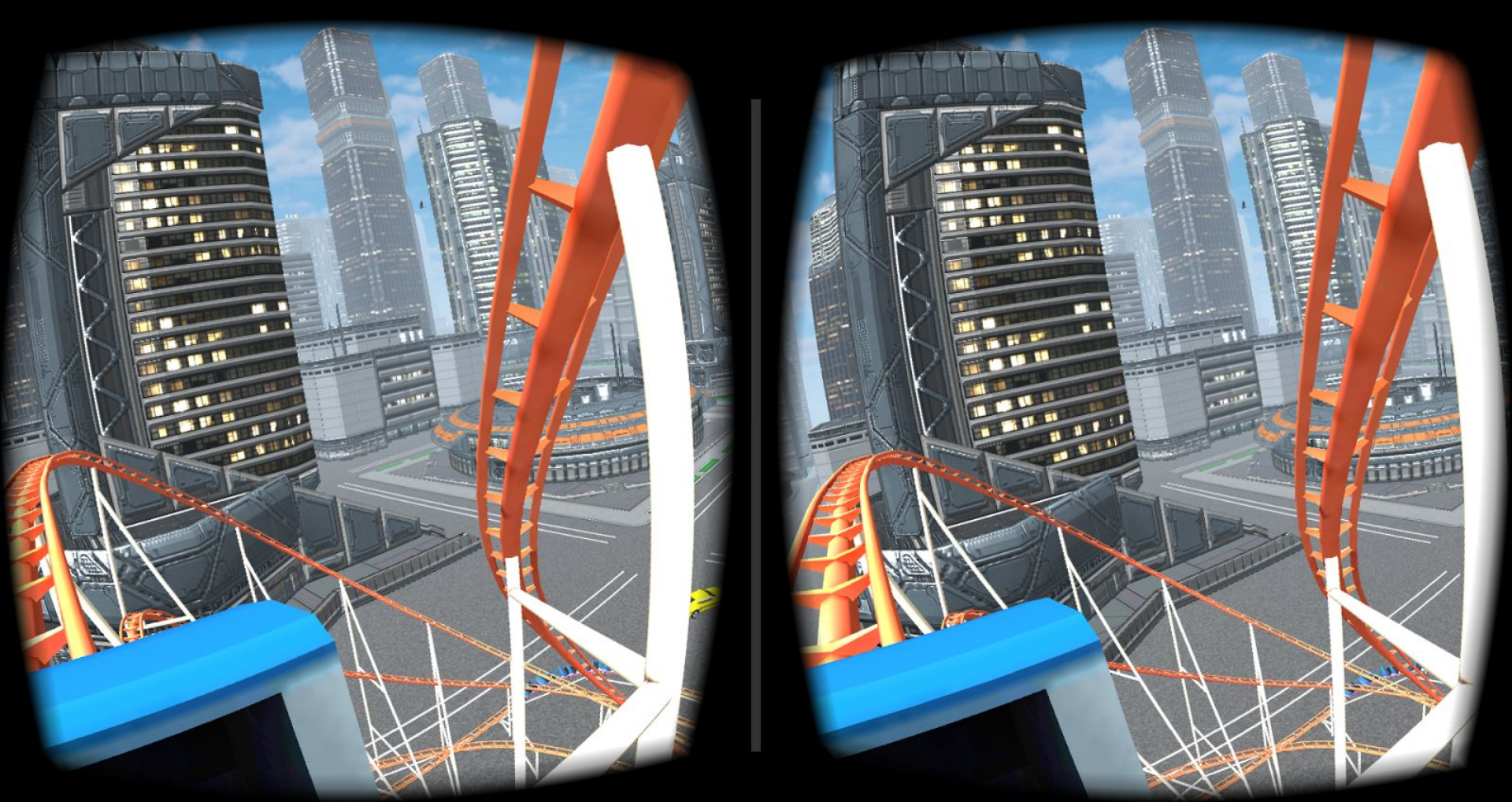
*"Depending on what service she would like.  
What service is she looking for?"*

# VR - Virtual Reality









VR uses stereoscopic  
images to feel 3D



What's next?







An AR windshield of the future







A mechanic wears Google Glass with AR to help tighten b-nuts much faster than with simple torque wrenches.





AR is coming to a surgery near you.





SIGHT SYSTEMS



SCORE: 000  
DIFFICULTY: **HARD**

BRONZE SILVER GOLD

PERSONALITY BETA  
PROBABILITY 75%  
**LIKES:**  
JUICE: APPLE

**A BEVERAGE PERHAPS?**

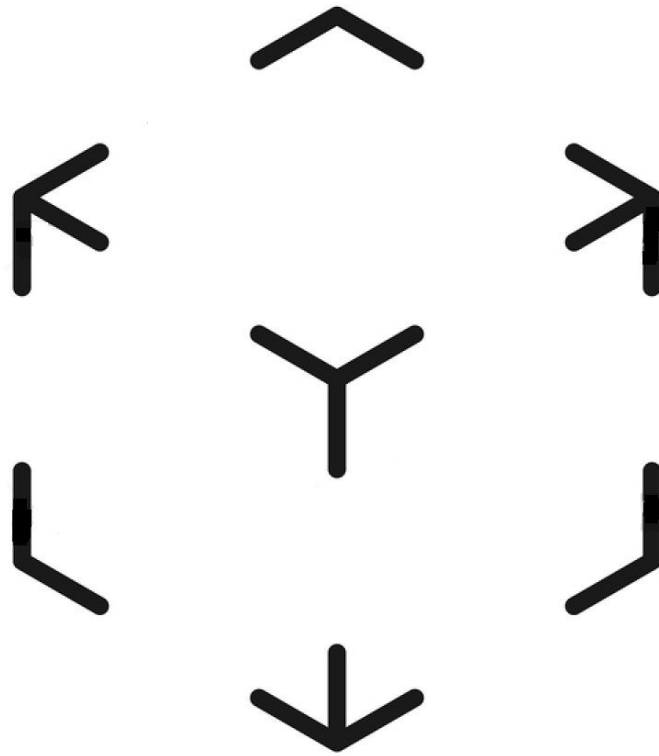
AR Dating services?





Art - in museums and on the street (even in the library?)





AUGMENTED REALITY



# Thank You

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