Virtual Realities

(…and a little bit of Data Science)

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Why Should I Care About VR?

- VR is AWESOME!
- Consumer-level VR is here, it works, and it's good (it's not just an academic research project)
- VR & associated tech will become an important tool for working with data (my presumptuous prediction)
- Data scientists should *at least* be aware of the technology, what it can do, and how it could potentially help your work

VR circa 1990

Things have gotten better…

VR circa 2016

VR From Low to High

Google Cardboard

Samsung Gear VR

Google Daydream

Playstation VR

Oculus Rift

HTC Vive

low-ish **high**

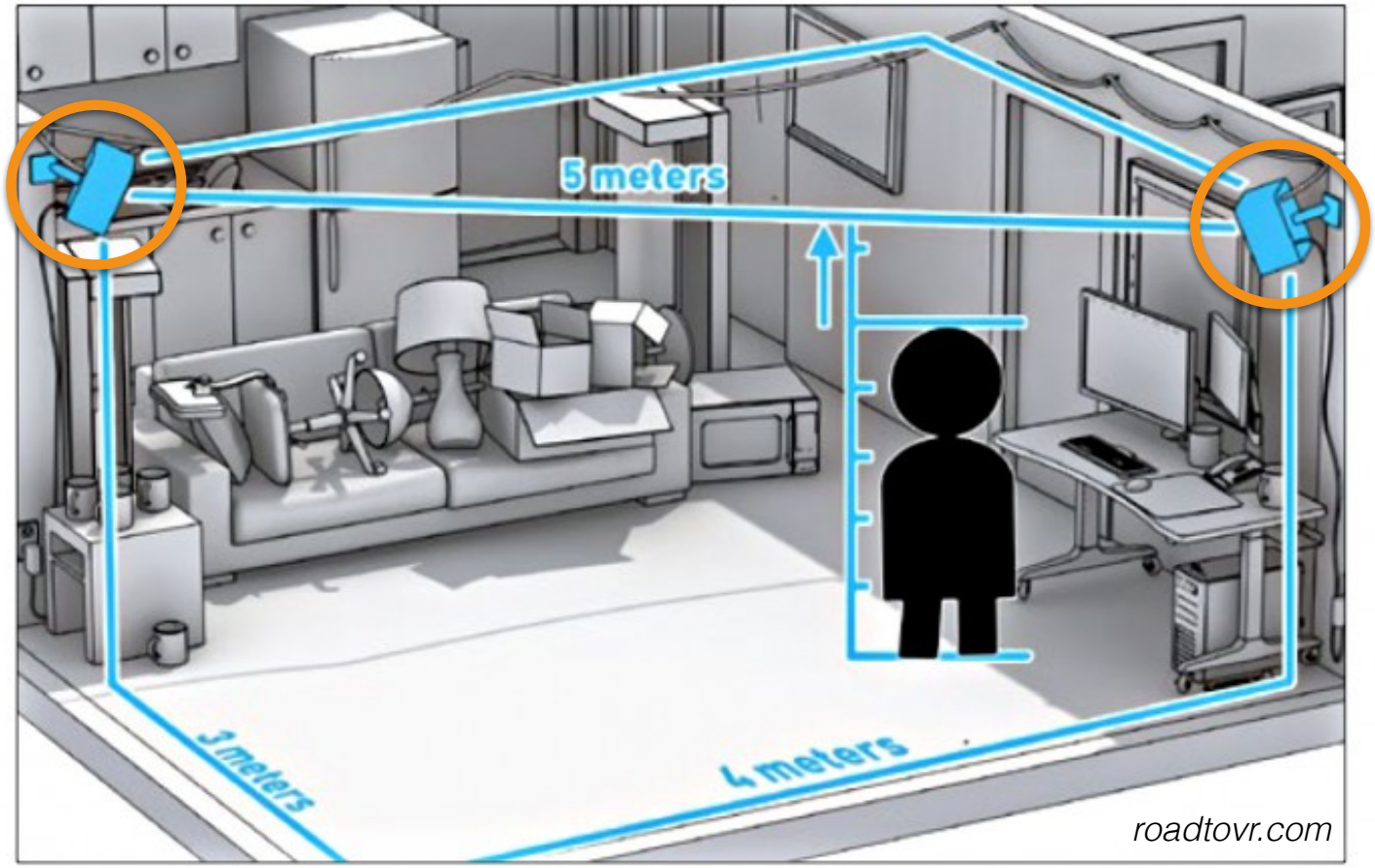
VR Quality (and price)

On The Low End

BYOCP (bring your own cell phone)

On The High End

You're going to need some space, but it's worth it



Some Ways in which VR Could Help Data Science

- Adds the important 3rd dimension
  - true 3D representations >> pseudo-3D
  - many types of data are inherently 3D
- Data presentation in VR could be a very compelling experience
- 3D representations invite interactivity
- VR is a new tool for us to use

The Current State of VR for Data Science

- The technology is here, but the software and tools aren't
- None of the standard data science "tools" (e.g. R, python, etc.) interface to VR platforms and probably won't for the foreseeable future
- It's prime time for developers to start making useful tools for data scientists (that could be you?)
  — the field is wide open

$$$

Platform	Cost	Notes
Google Cardboard	<$20	Need a cell phone
Gear VR	$99	Need a cell phone
Google Daydream	$79	Need a cell phone
Playstation VR	$399	Need PS4, camera
Oculus Rift	$599	Need a high-end PC
HTC Vive	$799	Need a high-end PC

Oculus & HTC are offering VR bundles (VR + PC) for ~$1500

My VR Platform Thoughts

- The Vive is the one to get *as of today*
  - includes 3D tracked controllers
  - allows for room-scale VR

- Oculus Rift is great too
  - more comfortable than the Vive, less “cabley”
  - 3D tracked controllers (Oculus Touch) coming soon

- Low-end VR is okay, doesn’t compete with the high-end

- Playstation VR is really fun, gives a near high-end experience, isn’t the right choice for data science work

Augmented Reality is Probably What Data Scientists Really Want

- Augmented Reality (AR) adds a new virtual layer of “information” into the real world
- Imagine the possibilities of annotating the real world with data (as just one example)
- It’s still too early, the technology isn’t quite here yet

Microsoft HoloLens

In Conclusion

Go ask your boss to buy a VR rig, for research purposes!

Thanks for listening!