Why isn’t my router working?
Why is my WiFi so slow?!?
How can I get unlimited wifi?

Jk, you can't ;)}
Motivation

How can we make routers better for everybody?
Demo
Hey sweetie! Our Wifi hasn't been working all day and if you're not busy, could you look into it for us please?
Hey sweetie! Our Wifi hasn't been working all day and if you're not busy, could you look into it for us please?

Hey mom. I called our ISP and it looks like there's an outage in the area so just sit tight, they'll have it sorted soon. Love you!
How does it work?

Real time router data → Cloud analytics
SEVERAL DAYS LATER
Hey man, the wifi isn't working
Calculate Network Speed

- Retransmission rate is the number of retries after data fails to send
Hey man, the wifi isn't working

Can you figure out what's going on?

You should try moving our router to a different location for better connection and we'll keep an eye on it for the next few days.
Challenges

● Scaling with thousands of data points
● Clustering: smoother, 5x faster
● Caching: instantaneous loading
Challenges

- Dealing with MongoDB data inconsistencies

Long list of models

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Easy to read data charts
Future Work

- Add machine learning to predict router crashes
- Integrate with existing SmartRG services
Special Thanks

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Questions?