

The background is a vibrant, multi-colored gradient. It features a diagonal split between a blue-purple gradient on the left and a yellow-orange gradient on the right. The text 'AWS re:Invent' is positioned on the left side, with 'AWS' in a smaller font above 're:Invent'.

AWS  
re:Invent

ARV201

# Create 3D Web Apps with AWS

## **William Cannady**

Sr. AR/VR Solution Architect  
Amazon Web Services

## **Eileen Faulds**

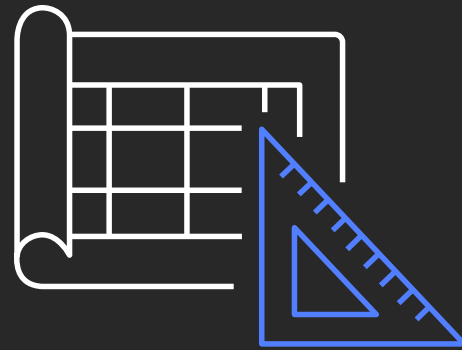
Founder  
A1Control, LLC

# Barriers to building

**Useful**



**Possible**



**Difficult**



What makes an AWS 3D application?

# An AWS 3D application

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Context awareness

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Natural language processing (NLP)

---

Globally available, scalable content

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Multi-user synchronization

---

Immersive, spatially aware 3D

# Adoption

# Universal adoption equation

$$A = O \sum_{S=1}^E \left( \frac{D+U}{C} \right)^S$$

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$$A = O \sum_{S=1}^E \left( \frac{D + U}{C} \right)^S$$

A: Adoption

S: Starting requirements

E: End requirements

D: Developer ability

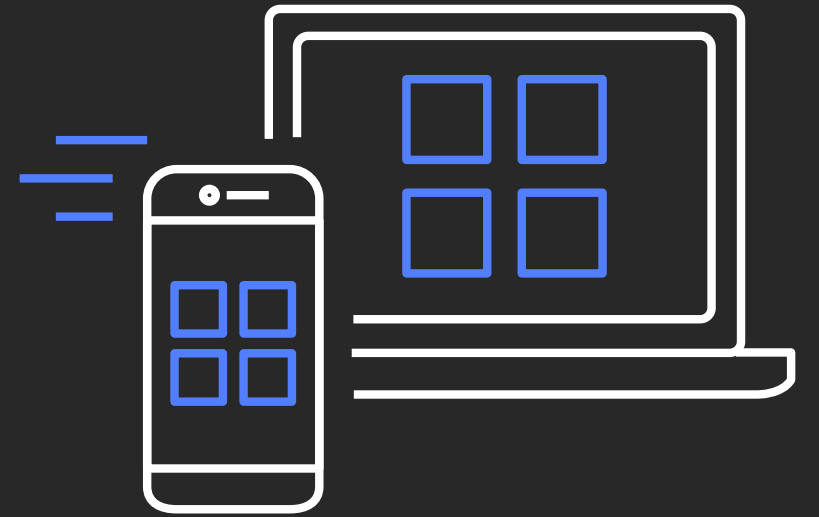
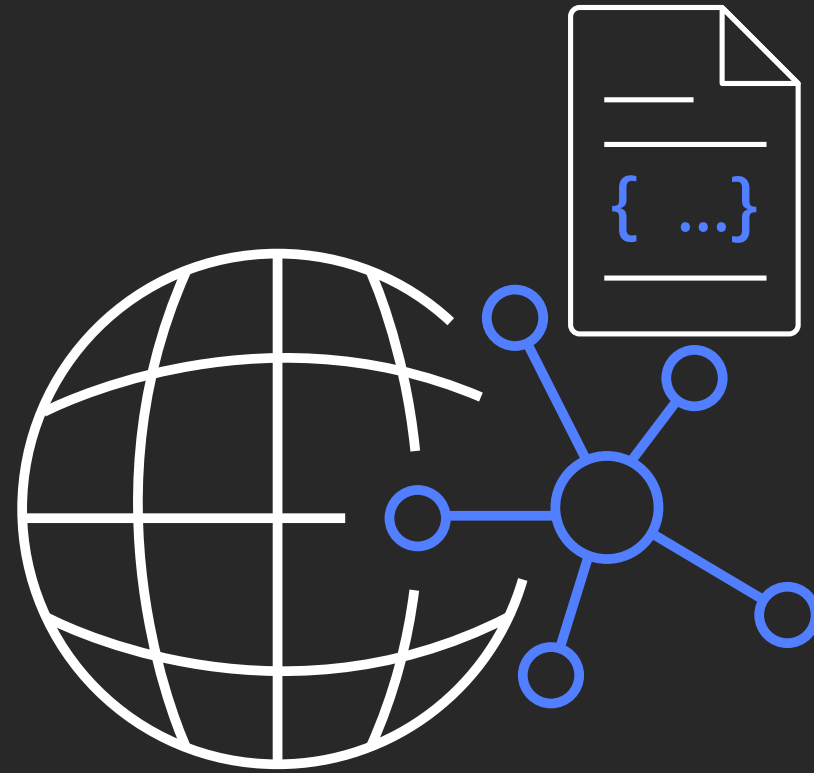
U: User ability

C: Project cost

O: "Oops" coefficient

To go **forward**, you must go **back**





Does a tool exist that works for today's developer?



# Introducing Amazon Sumerian

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Create

---

Integrate

---

Deploy

# Demo

# Benefits of AWS with Amazon Sumerian



**Start Quick with  
quality animations  
hosts / avatars**



**Progress  
monitoring**



**Life-like characters to  
guide / narrate your  
applications**



**Configurable  
scenarios**



**Tight integration with  
secure AWS services  
(Sumerian, Polly,  
S3, Cognito)**



**Deploy to any platform  
that supports WebGL**

# Universal adoption equation

$$A = O \sum_{S=1}^E \left( \frac{D + U}{C} \right)^S$$

A: Adoption

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D: Developer ability

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# Solving for "U"(ser) experience



*“The last creature on earth to discover water will  
most certainly be a fish”*

Marshall McLuhan

**Gamification ≠ Gaming**



**Eileen Faulds**

Founder  
A1Control, LLC



**A1CONTROL**

A1Control provides personalized diabetes technology education in order to help diabetes technology companies improve outcomes associated with their devices while reducing their educational costs.

# Problem



+



=



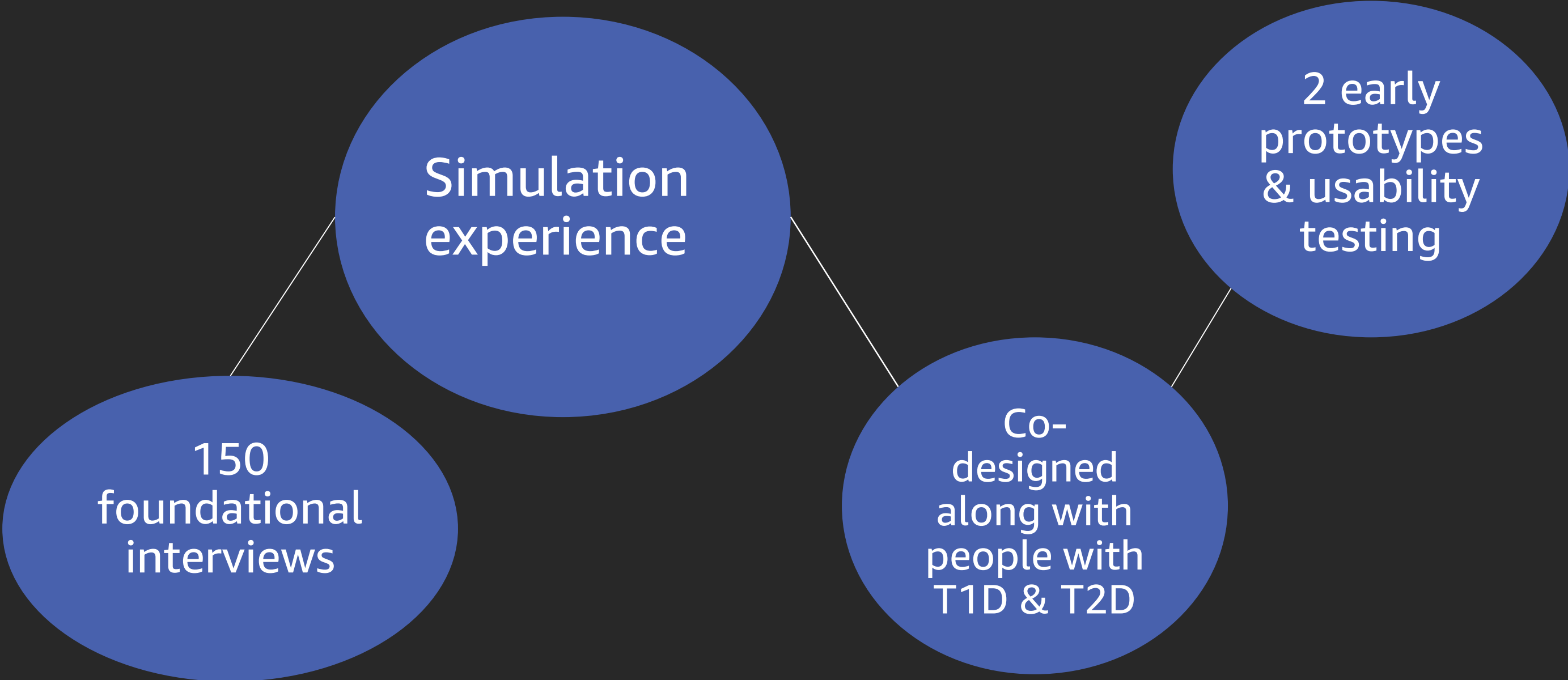
Why now



Why now



# Crafting our solution



# Our goal

We needed to create a high quality simulation experience.

**1.**

## **Train**

Train patients to  
optimize their  
diabetes  
technology

**2.**

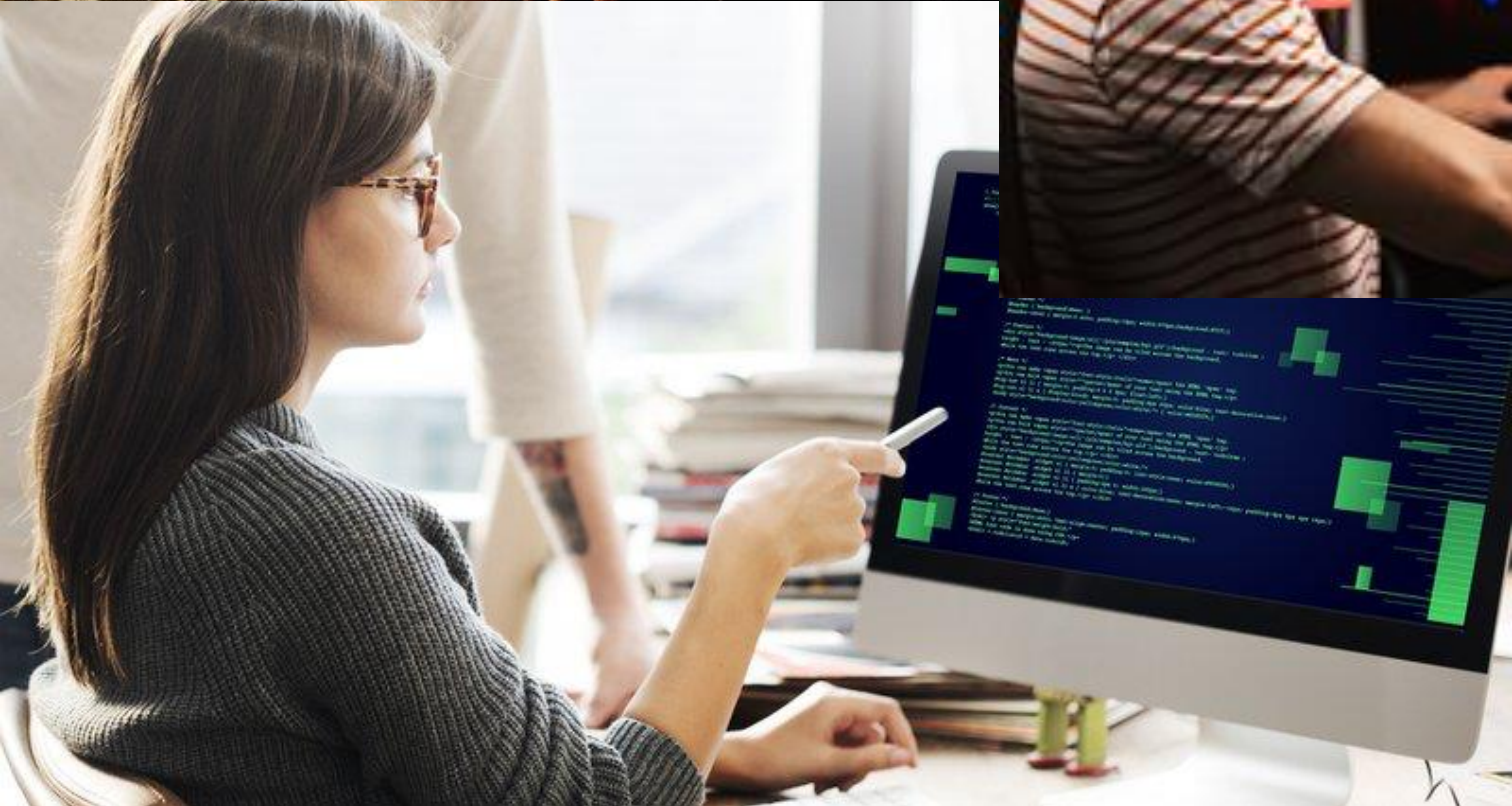
## **Educate**

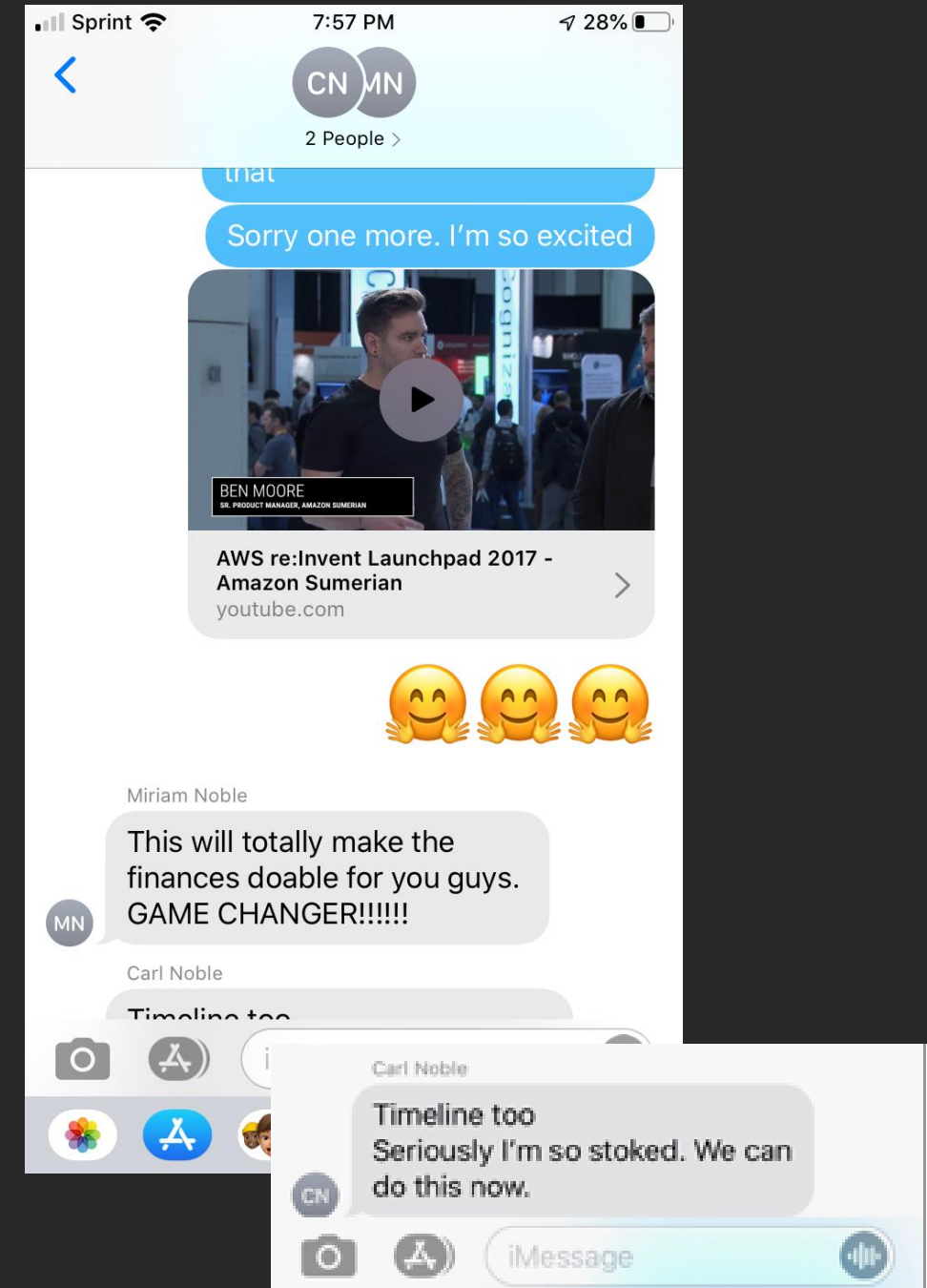
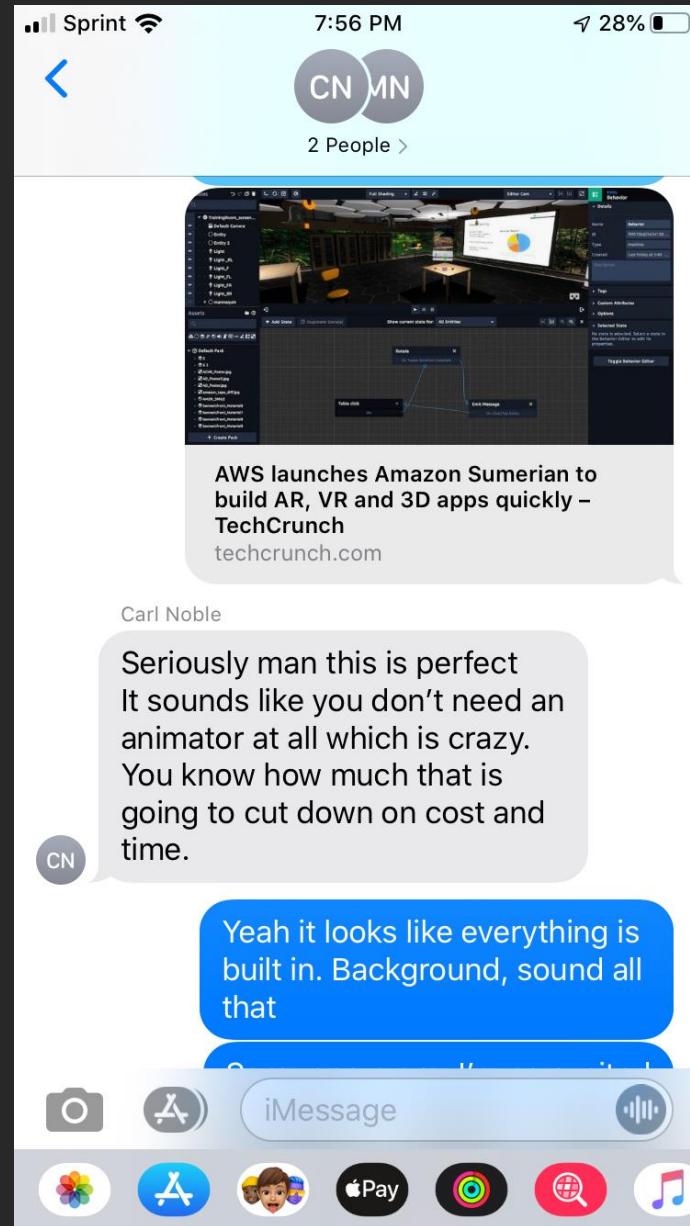
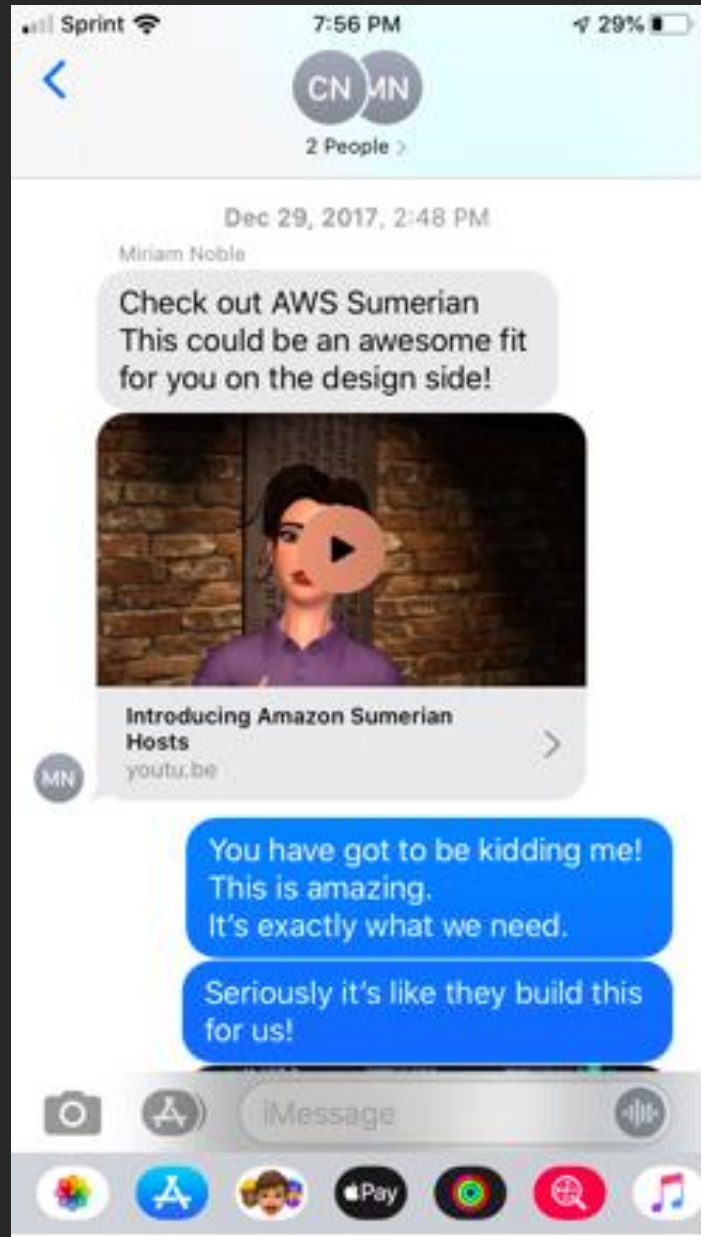
Educate patients on  
everyday and  
emergency diabetes  
self-management  
challenges

**3.**

## **Assess**

Gather back end  
data for patient  
assessment and  
technology  
personalization





# Demos



# Demos



# Demos



# Demos





**That Darn Fish!**



# Demos



# Database

Users / cblewis619 / Scenerio1 / S4 Earned On 2019-10-08 20:20:53

Status	Glucose	Action	Possible Actions	Time	State	Dialog
Very High	260	Init	Init,Reprompt,Exerci	2019-10-08 16:00:19	Initial	none
Very High	260	Wait	Init,Reprompt,Exerci	2019-10-08 16:00:19	Initial	none
Very High	310.	Init	Init,Reprompt,Check	2019-10-08 17:00:19	OkState2	none

# Analytics

Analytics

ANALYTICS

GO TO PUBLISHED SITE

## Copy / Review / Publish

### Scenerios

A1SceneriosV2\_kd

Welcome WelcomeBack Scenerio100 Scenerio101 Scenerio102 Scenerio103 Scenerio104 Scenerio1 Scenerio2 Scenerio3 Scenerio4 Scenerio5 Quiz Terms Animations

Scene	Starting Time	Scene Points	Scene Type	State Name	MetaData	State Points	GC Level	User Events	TimeIncr	NextState	Dialog
	12:00	3	welcome	Initial		0	Very Low	OnInit OnReprompt OnHelp Time/Date		0	#host #cam.host #anim.Idle Hi there! #ges #avatar #cam.wide #anim.wave #host #gesture.heart I am here to help you can arise with your diabetes. Pick a scene experience. #host #gesture.Bored . Come on, let's pick #host To pick a scenerio just click on the s a level that interests you. #host First things first! #gesture.Big Let's s ready. #anim.play.gesture-salute #host Gn pump. #anim.play.pump-use Tap the ACT up screen. First choose the 12-hour or 24- display military time. Chose the set-up tha #host Great job! Now you can program the change the date and time on the screen. N today's date. After each entry press ACT to #host Fantastic. Now we can program you

Published by Google Sheets - Report Abuse - Updated automatically every 5 minutes

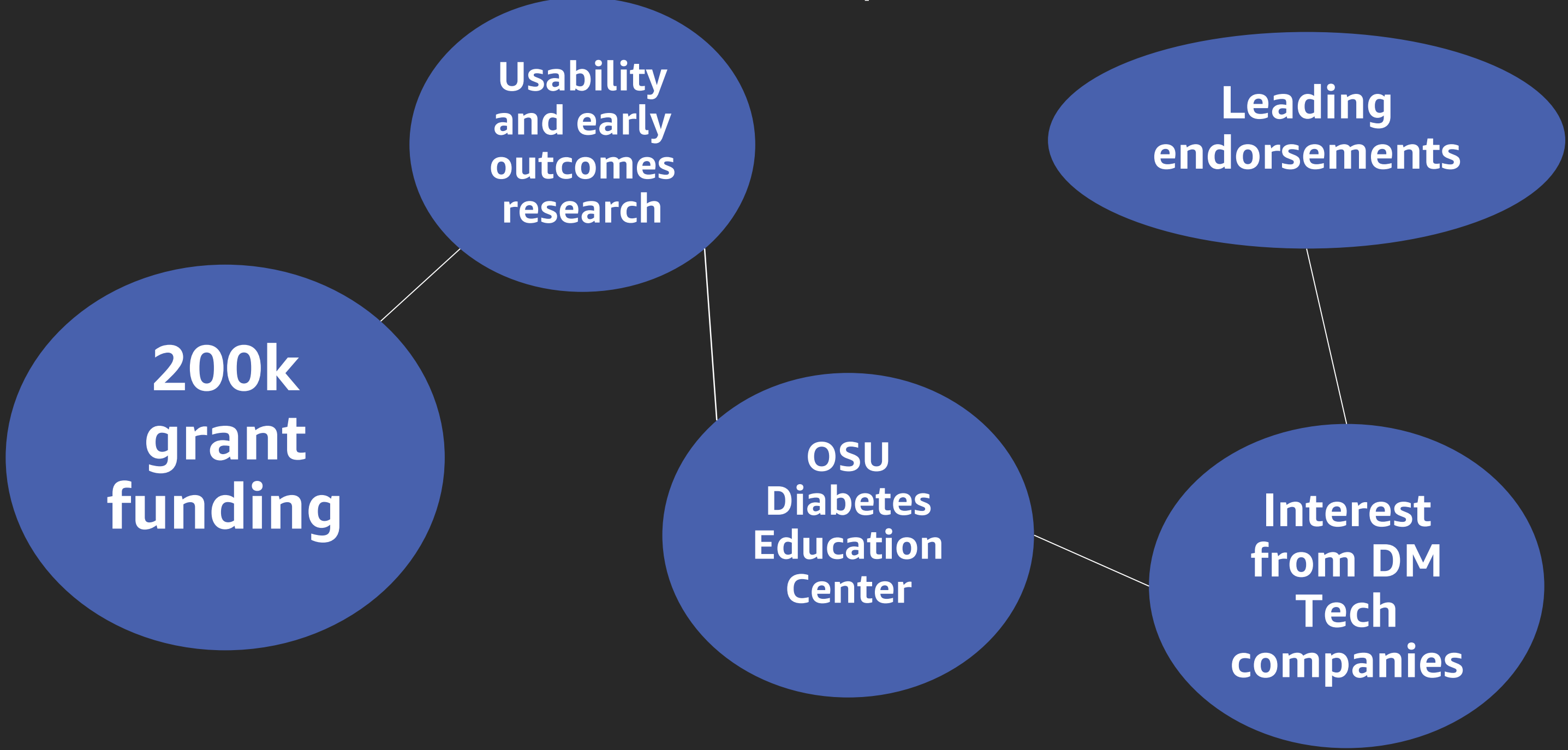
EDIT PUBLISH

# Database

Users / randy / Scenerio 100 / ★★★ Earned On 2019-07-31 12:30:44

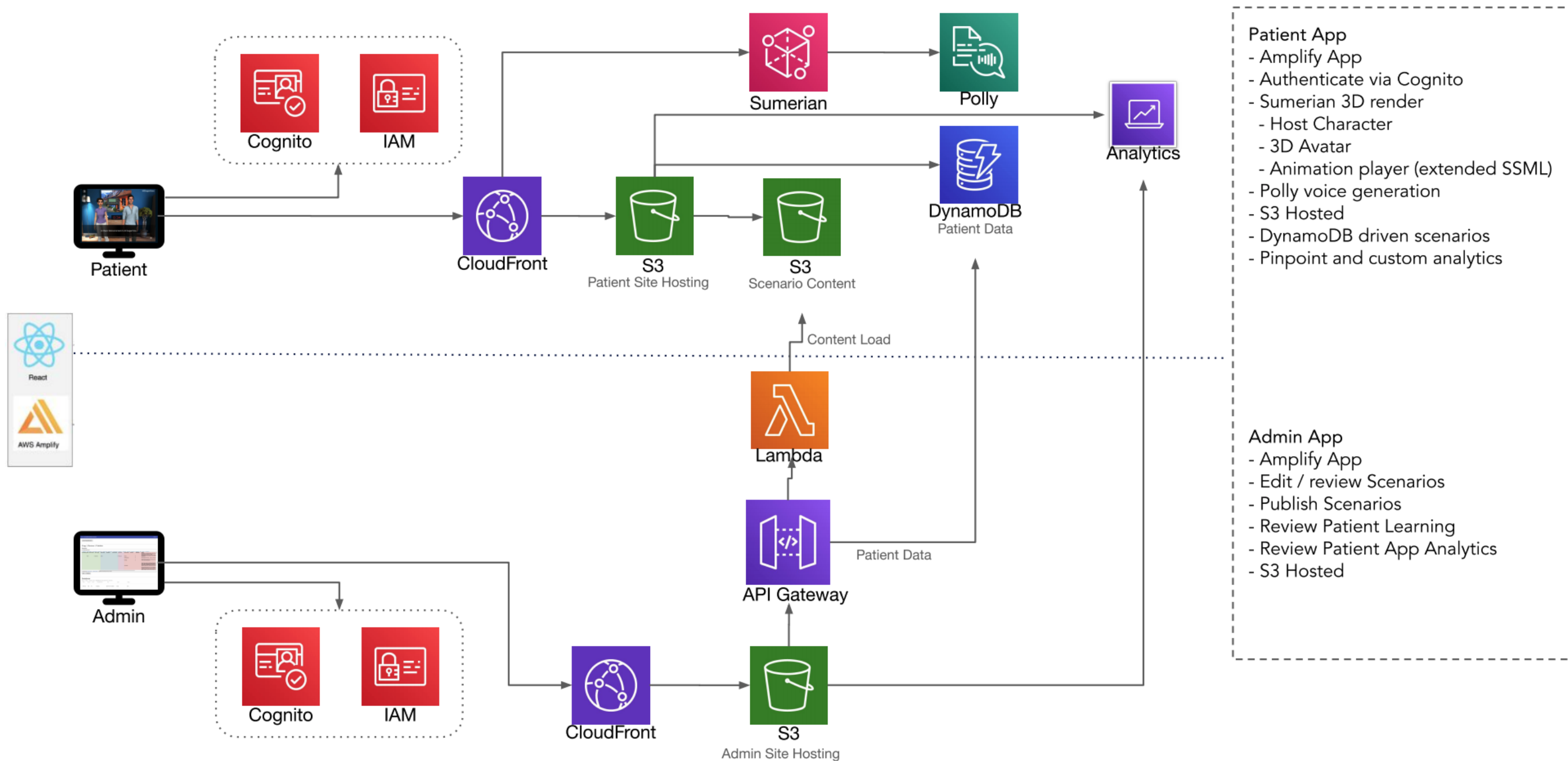
Status	Glucose	Action	Possible Actions	Time	State	Dialog
Nominal	106	Init	Init,Bolus	2019-07-31 16:00:09	Initial	none

# Current Status/Next Steps



AWS  
re:Invent

# Architecture



- Patient App**
- Amplify App
  - Authenticate via Cognito
  - Sumerian 3D render
  - Host Character
  - 3D Avatar
  - Animation player (extended SSML)
  - Polly voice generation
  - S3 Hosted
  - DynamoDB driven scenarios
  - Pinpoint and custom analytics

- Admin App**
- Amplify App
  - Edit / review Scenarios
  - Publish Scenarios
  - Review Patient Learning
  - Review Patient App Analytics
  - S3 Hosted



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# An AWS 3D application

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Immersive, spatially aware 3D

Q: This sounds great, how can I get started?

A: Get your hands messy

Q: But I'd like some Guidance. Can you help?

A: For sure! Check out our resources pages:

Tutorials: [bit.ly/sumeriantutorials](https://bit.ly/sumeriantutorials)

Articles: [bit.ly/sumerianarticles](https://bit.ly/sumerianarticles)

Documents: [bit.ly/sumeriandocs](https://bit.ly/sumeriandocs)

# Download free book

## *Amazon Sumerian by Tutorials*

Are you ready to develop 3D immersive experiences with Amazon Sumerian? The raywenderlich.com Tutorial Team wrote this book to help you get started.

You do not need to be a programmer or a 3D whiz kid. You just need some free time and a modern web browser.

Use the QR code to download today!



EARLY  
ACCESS EDITION



# Amazon Sumerian

## by Tutorials

FIRST EDITION

Learn Amazon Sumerian by Creating 4 Complete Apps

By the raywenderlich Tutorial Team  
Brian Moakley & Gur Raunaq Singh

# Thank you!

**William Cannady**

cannadw@amazon.com

**Eileen Faulds**

Eileen.faulds@a1control.org



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