



# AI for Product Managers

**“AI will be in nearly  
every software product  
by 2020” - Gartner**



**POLL: Do you have AI  
currently in your  
software product?**



**POLL: Do you have AI  
currently have AI on  
your roadmap?**



# About Me



(Data Scientist)



(Founder/Entrepreneur)



(AI Product Manager)



PRODUCT  
SCHOOL



PLURALSIGHT



# Overview

**Design a  
Chatbot**

**Build a  
Recommendation  
System**

**AI Acceleration!**

# Terminology

**Chatbot**

**Voice Assistant**

**Recommendation  
System**

**Virtual Assistant**



# Design a Chatbot

# Chatbot Success Stories



**duolingo**



New bots added regularly

Icon of a chef wearing a toque-blanc hat, smiling.

**Chef Roberto**

A legendary pizza maker. Be careful not to insult his creations!

Icon of a person wearing a yellow cap and smiling.

**Renée the Driver**

For what to see and where to go, Renée's the one to know.

Icon of a police officer wearing a helmet and smiling.

**Officer Ada**

From protecting and serving to teaching languages, Ada does it all.

# Chatbot Success Stories



**Increased New Opportunities by 170% over 3 months**

A screenshot of a chatbot interface. At the top, it says "Bot" and "Online Now". A message from the bot reads: "Hey there! You can grab a time on Kevin Karner's calendar here 📅". Below this, there is a button with a checkmark that says "Schedule a Meeting" and "30 Minutes". To the right of the button is a small profile picture of a man and the name "Kevin Karner". Below this, there is a section titled "SELECT A DAY" with three options: "Monday January 3, 2017", "Tuesday January 4, 2017", and "Wednesday January 5, 2017". There is also a partially visible option for "Thursday January 6, 2017".

# Chatbot Success Stories



Adobe



# **\$\$\$ Value \$\$\$**

**Hands Free Product  
Usage**

**24/7 Availability**

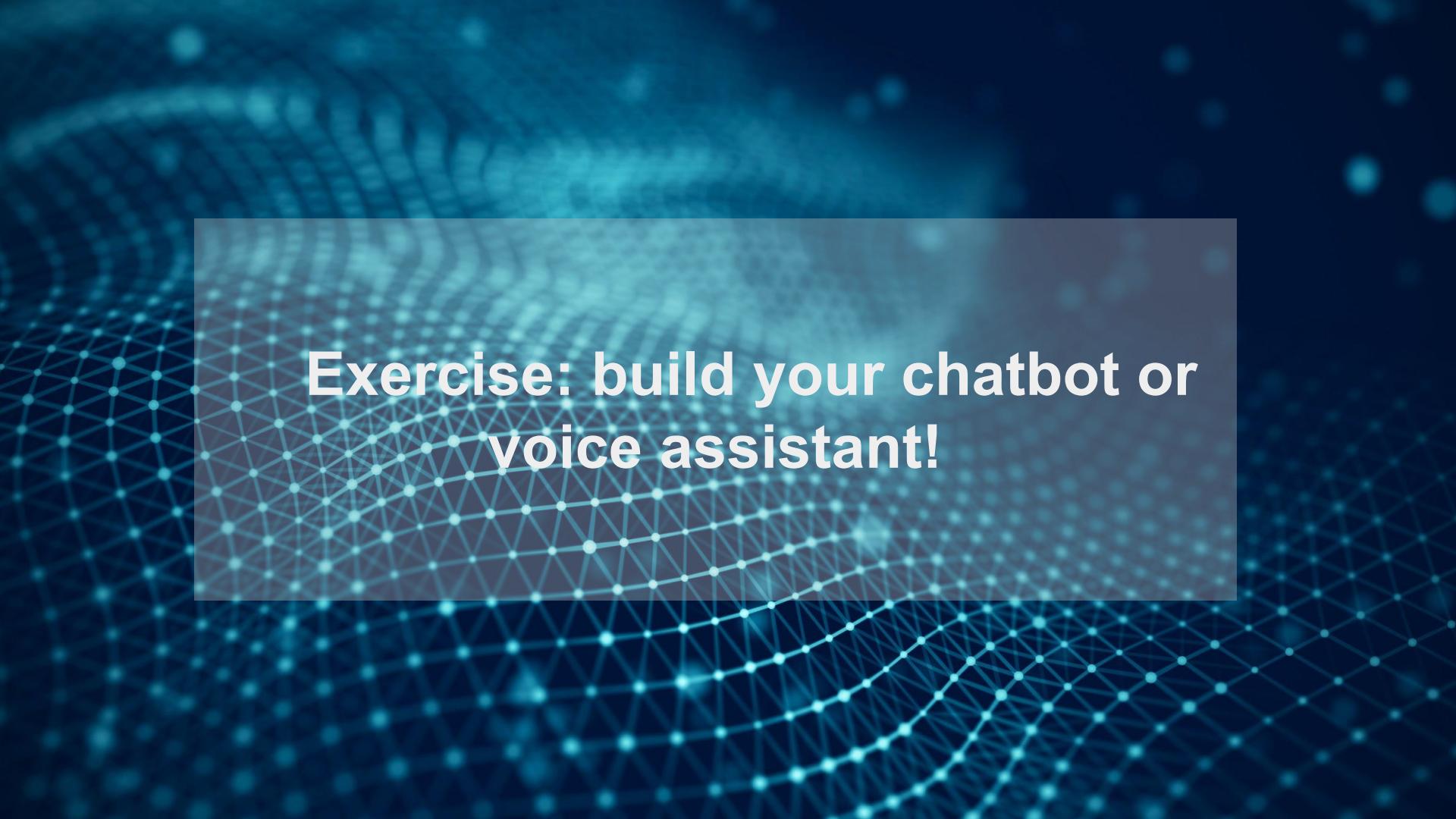
**Business Cost  
Reduction**

**Faster Response  
Time**

**Exercise: brainstorm 4 chatbot  
use cases for a virtual assistant in  
4 minutes!**



Demo



**Exercise: build your chatbot or  
voice assistant!**

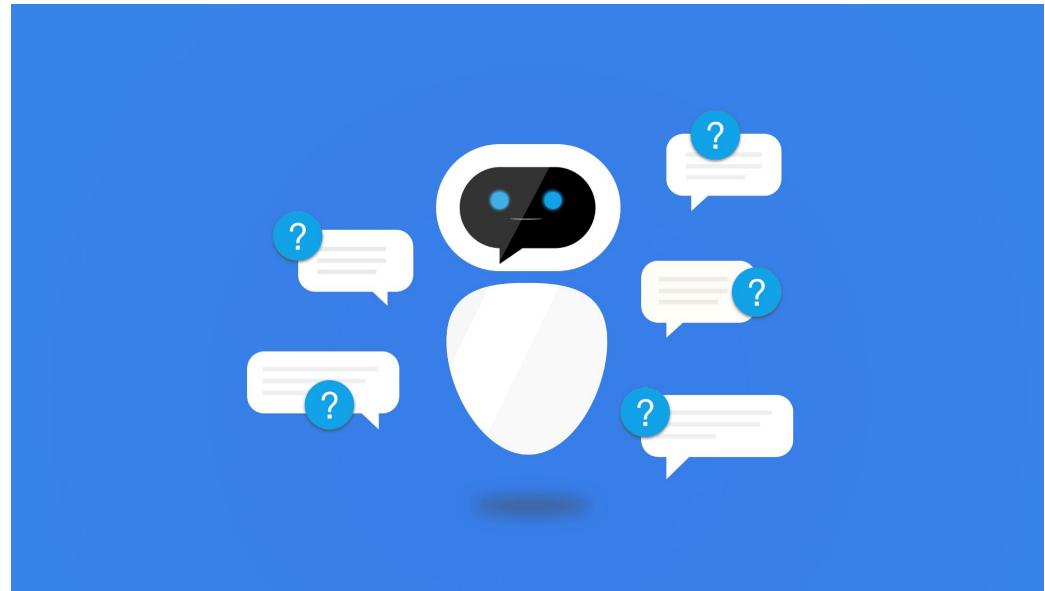
**Question: What are the ingredients that make a chatbot successful?**

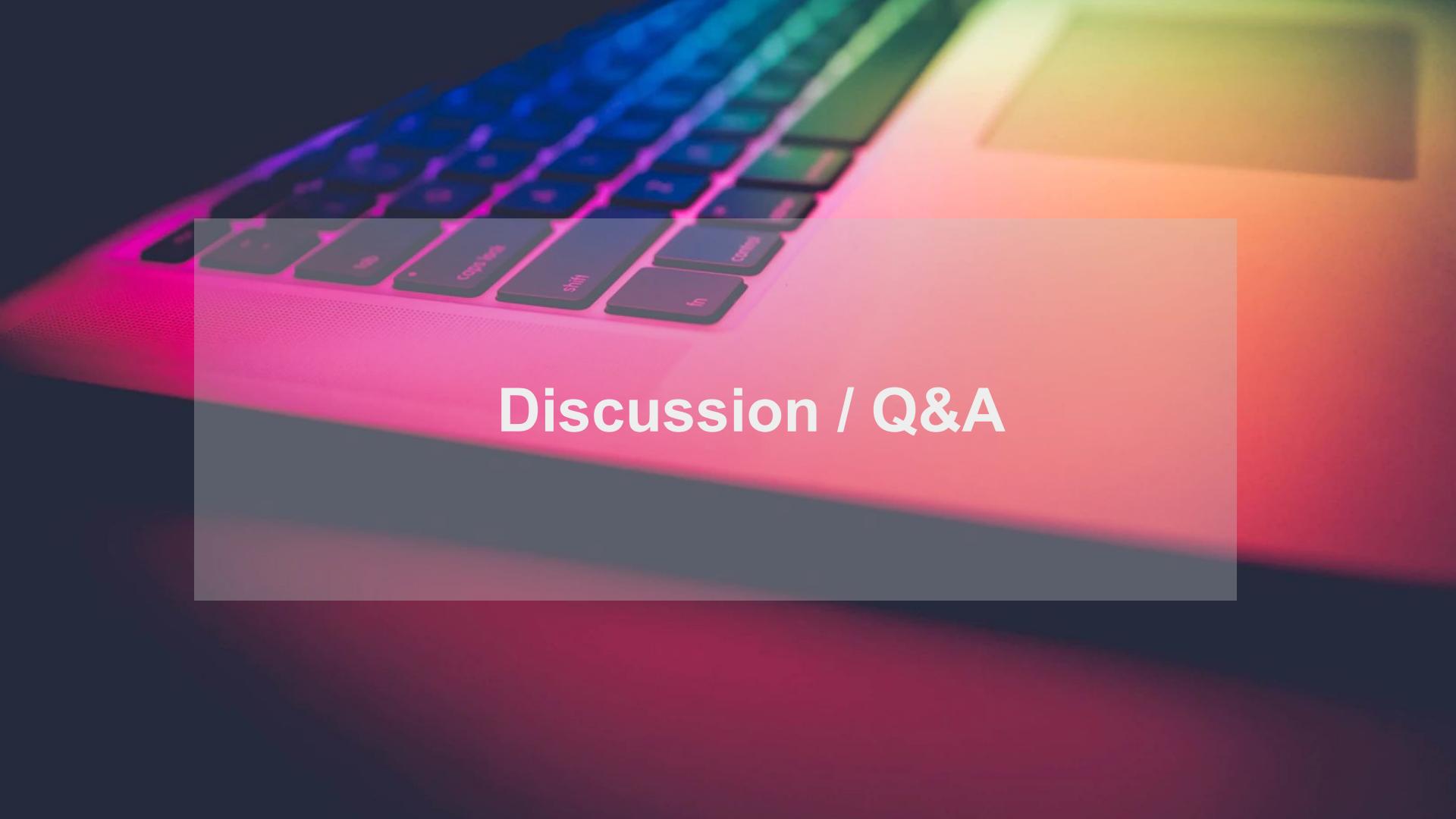
# Design Principles

**Repetitive**

**Predictable**

**80% Rule**





## Discussion / Q&A



A large crowd of people at a concert or event, viewed from behind, illuminated by stage lights. The scene is filled with silhouettes of heads and shoulders against a backdrop of bright, colorful stage lighting.

Break



# Build a recommendation system

## Recommendations for you in Cell Phones & Accessories

For Apple Watch Series 2



2-Pack

Quick look

## Recommendations for you in Tools & Home Improvement



# NETFLIX

[Browse ▾](#)[KIDS](#)[DVD](#)

NETFLIX

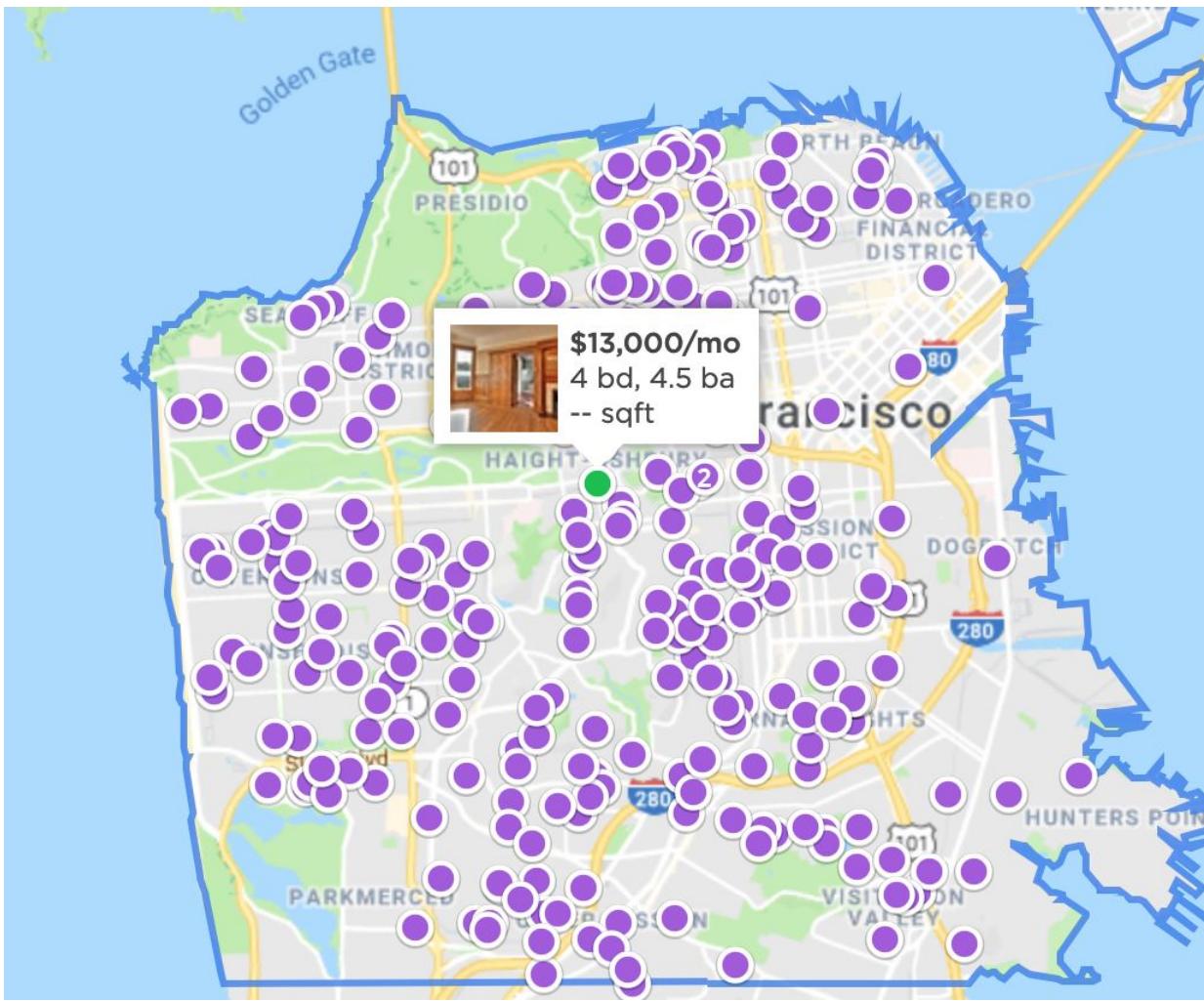


## Trending Now



## Watch It Again







## Instant Update

This home has been listed **for rent** at \$3,106/mo.



● FOR RENT

\$3,106/mo

1 bd, 1.0 ba, 820 sqft, Pets: cats, dogs

**Riva Terra Apartments at Redwood Shores, 1 Bedroom F (HS), Redwood City, CA**

[See latest search results](#)

### Homes you might like



● FOR RENT

\$5,000/mo

4 bd, 2.0 ba, 1,710 sqft, Pets: --

**150 Inner Cir, Redwood City, CA**



● FOR RENT

\$3,990/mo

3 bd, 1.0 ba, 1,140 sqft, Pets: --

**1615 Huron Ave, San Mateo, CA**

machine learning



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About 38,200,000 results (0.45 seconds)

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## Machine Learning Course | Discover The Udacity Advantage

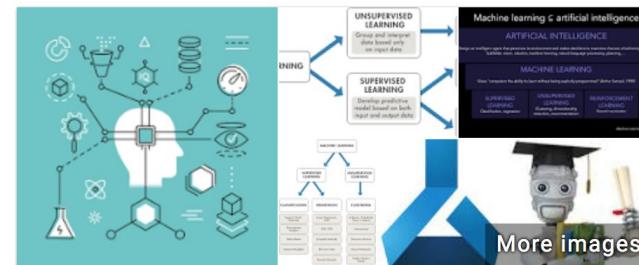
[Ad](#) [www.udacity.com/](http://www.udacity.com/) ▾

Learn To Become A Machine Learning Engineer & Start Making Predictive Models. Engaging Content.

## Machine learning - Wikipedia

[https://en.wikipedia.org/wiki/Machine\\_learning](https://en.wikipedia.org/wiki/Machine_learning) ▾

Machine learning is a field of computer science that often uses statistical techniques to give computers the ability to "learn" (i.e., progressively improve performance on a specific task) with data, without being explicitly programmed. The name machine learning was coined in 1959 by Arthur Samuel.



## Machine learning

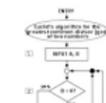
Field of study

Machine learning is a field of computer science that often uses statistical techniques to give computers the ability to "learn" with data, without being explicitly programmed. The name machine learning was coined in 1959 by Arthur Samuel. [Wikipedia](#)

## People also search for



Artificial intelligence



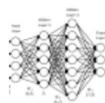
Algorithm



Deep learning



Natural-l...  
processing



Artificial  
neural  
network

Feedback



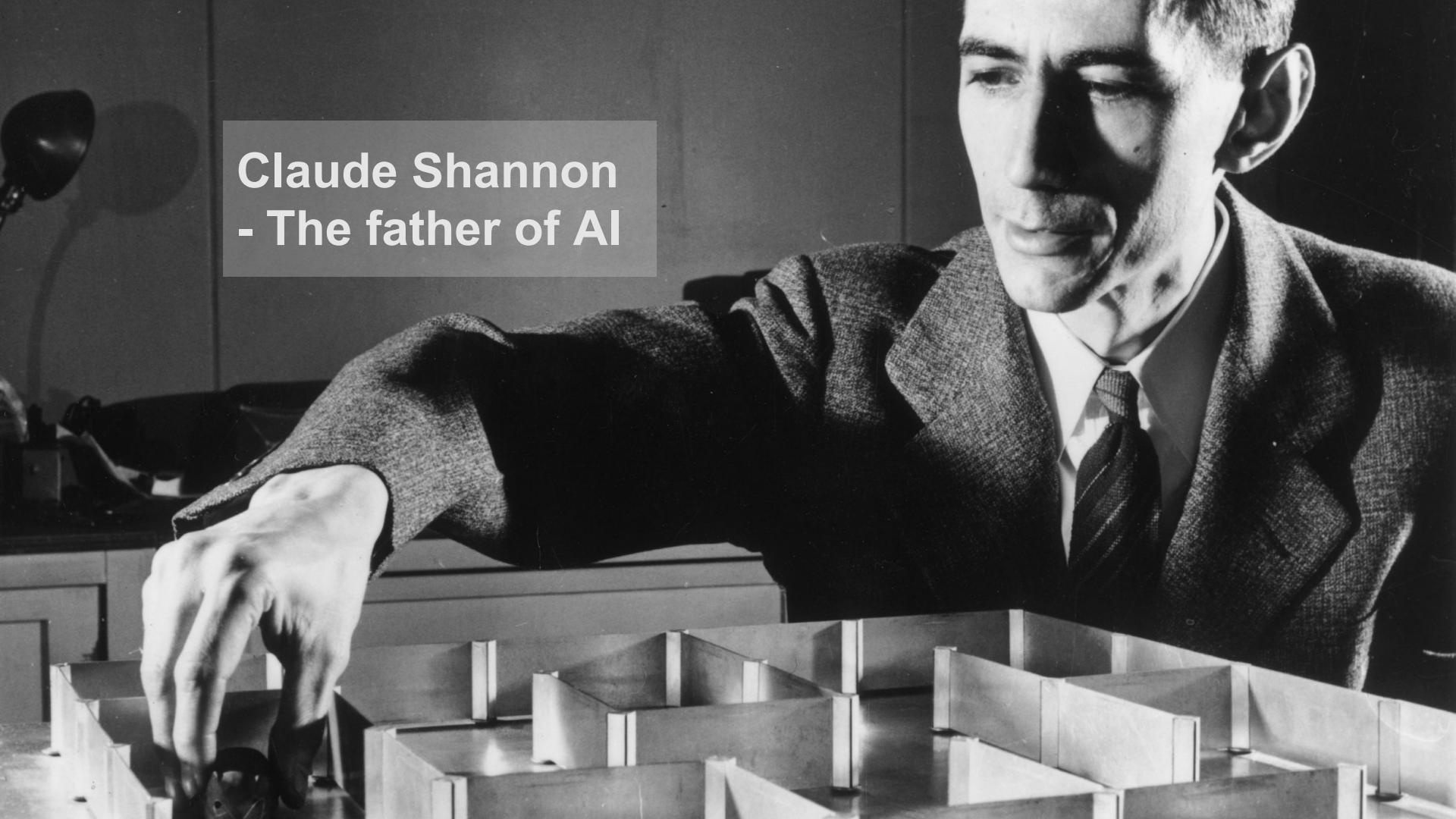
# Information Overload



Google amazon



Microsoft

A black and white photograph of Claude Shannon, a man with short hair, wearing a suit and tie. He is leaning over a complex wooden maze structure, his hands near the entrance. The maze is made of light-colored wood and has many compartments and openings. In the top left corner of the image, there is a dark, semi-transparent rectangular box containing the text.

# Claude Shannon

- The father of AI

```
x = int(input())
y = int(input())
if x > 0:
    if y > 0:
        print("Quadrant I")
    else:
        print("Quadrant IV")
else:
    if y > 0:
        print("Quadrant II")
    else:
        print("Quadrant III")
```

# Recommendation Systems

**Content  
Similarity**

**Collaborative  
Filtering**

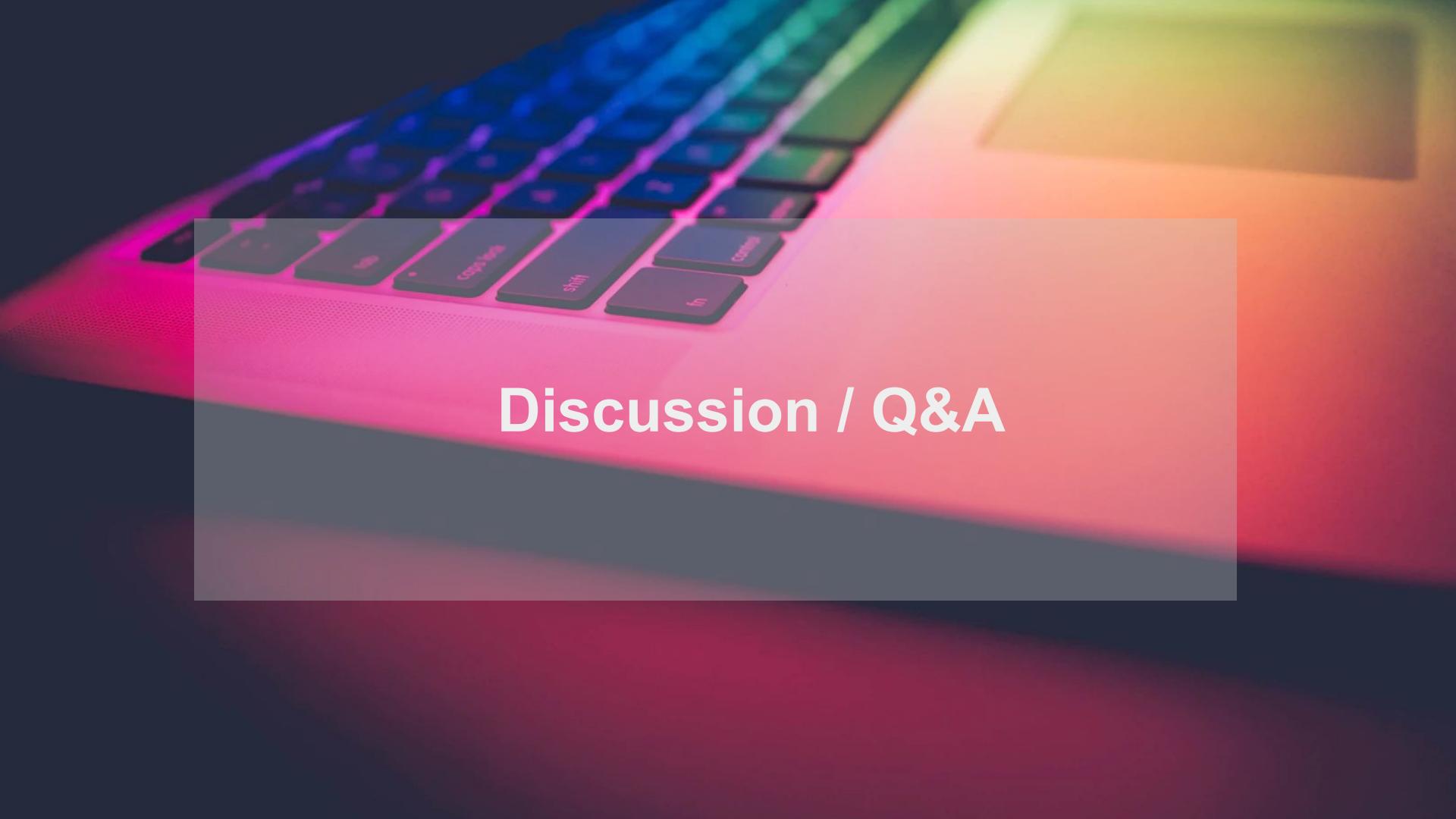
**Hybrid Systems**



**Demo: How to build a  
recommendation system**



**Exercise: Build an IMDB movie  
recommendation system!**



## Discussion / Q&A



A large crowd of people at a concert or event, viewed from behind, illuminated by stage lights. The scene is filled with silhouettes of heads and shoulders against a backdrop of bright, colorful stage lighting.

Break

A photograph showing three people in a modern office setting, focused on a whiteboard covered with numerous colorful sticky notes. A woman in the foreground, wearing a plaid shirt, is writing on a note with a blue pen. Two men in the background, one in a light blue shirt and another partially visible, are observing the board. The scene is well-lit with natural light from a window behind them.

# Accelerating AI

**Question: What is  
slowing down AI  
product development in  
your company?**

# Common Challenges

- Lack of ML resources
- Compute resources
- Customer agreements
- Executive support
- Data availability
- Design & user experience
- Measuring impact
- Slow development



# 5 Types of Data Scientists

**Data Analyst**

**Data Engineer**

**Machine Learning  
Engineer**

**Product Data  
Scientist**

**Data Science  
Researcher**

**Quantitative Analyst**

# 8 Blockers

**Missing Data  
Analyst**

**Missing Data  
Engineer**

**Silo'ed data  
scientist**

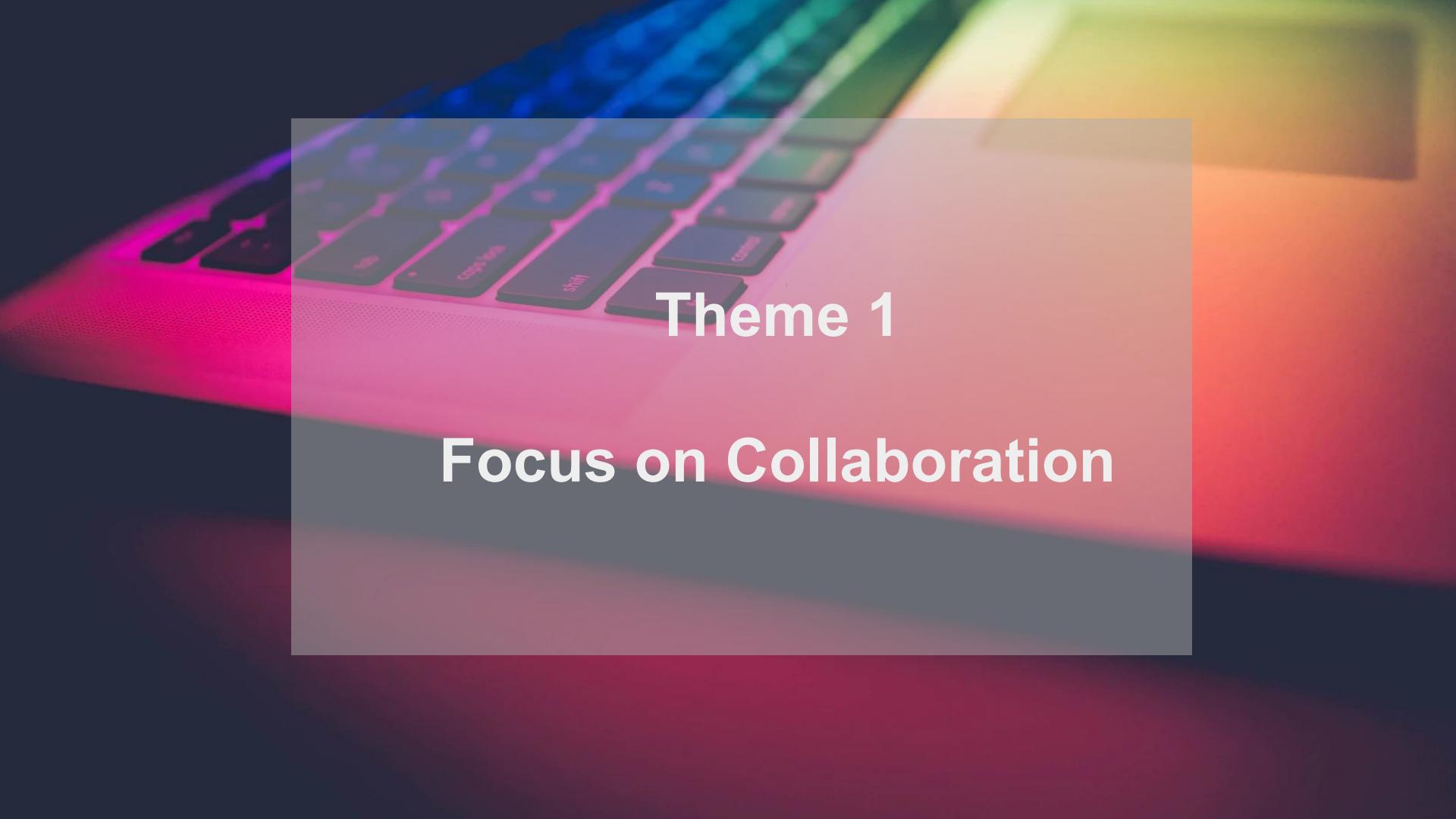
**Lack of  
Collaboration**

**Lack of AI/Data  
Familiarity**

**Reinventing the  
wheel**

**Lack of clarity on  
portfolio strategy**

**Lack of Data  
PM'ing**



The background of the slide is a close-up photograph of a laptop keyboard. The keys are illuminated with a soft, glowing light that transitions through various colors, including blue, green, yellow, orange, and red. The lighting creates a dynamic, blurred effect that suggests motion or digital energy. The overall aesthetic is modern and tech-oriented.

# Theme 1

## Focus on Collaboration

# Common Practice

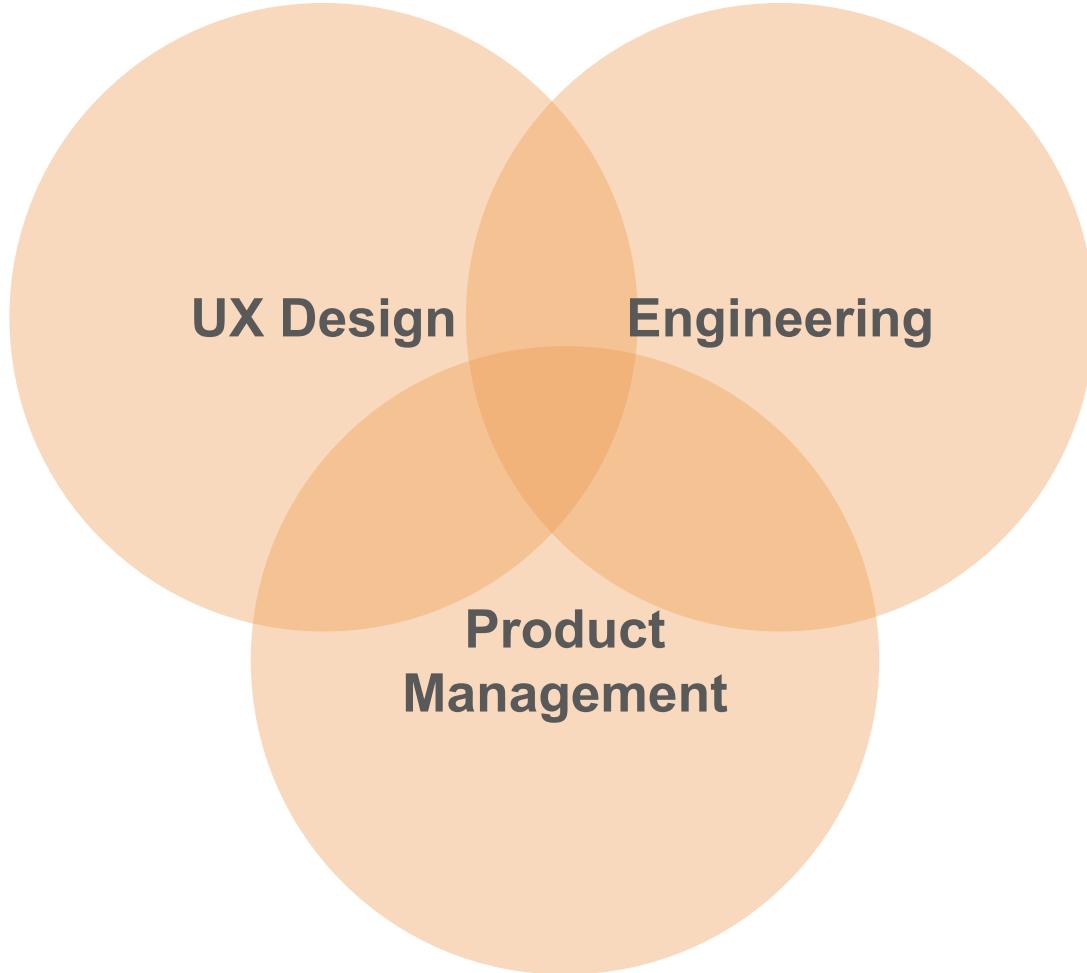
Data science and analytics function as “consultants”

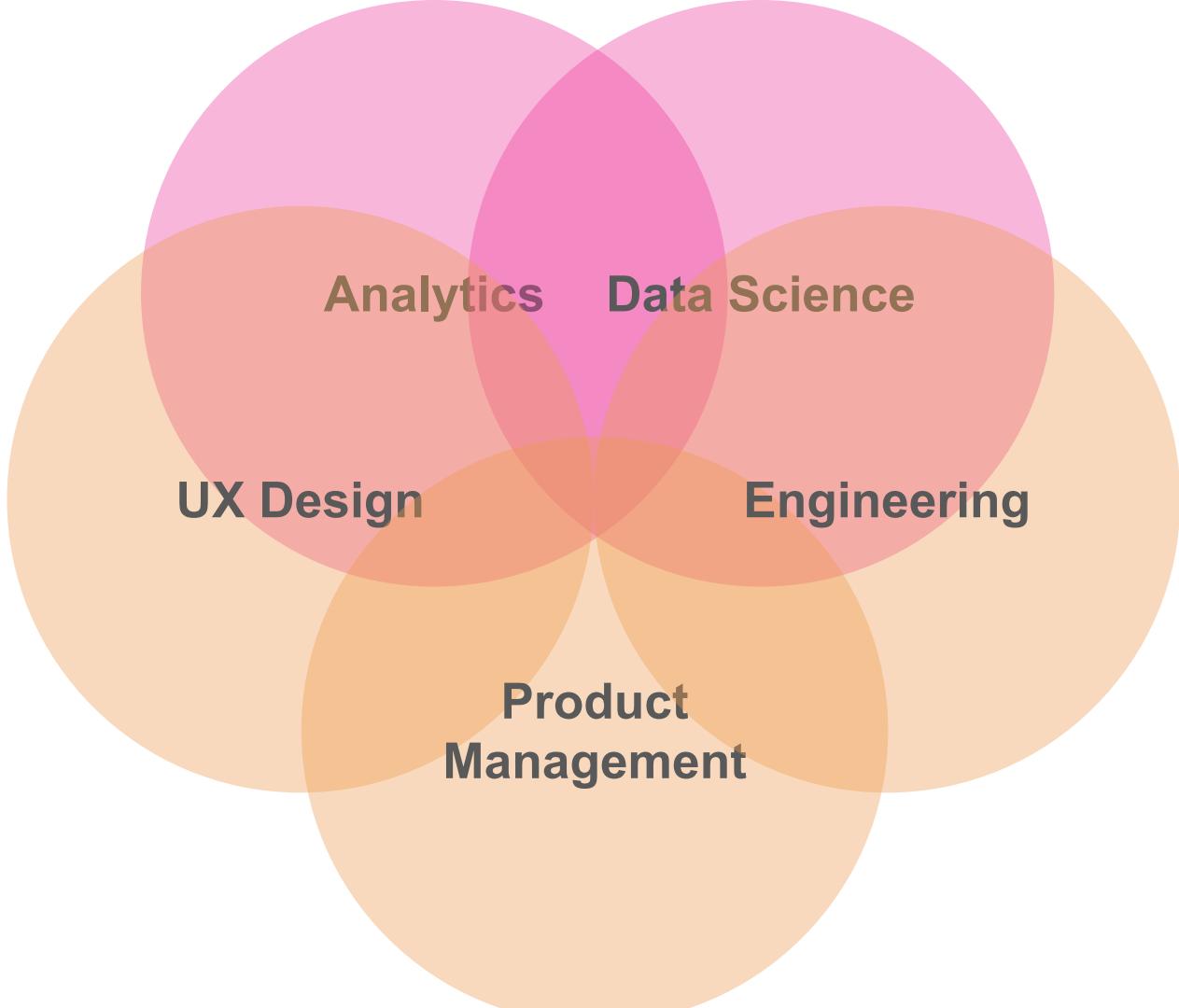
IPs are designed sequentially

# Best Practice

Data is part of dev team

IPs are designed collaboratively





## Theme 2

Deepen Familiarity with AI  
Tools



# 100 STARTUPS USING ARTIFICIAL INTELLIGENCE TO TRANSFORM INDUSTRIES

## CONVERSATIONAL AI/ BOTS



## VISION



## AUTO



## ROBOTICS



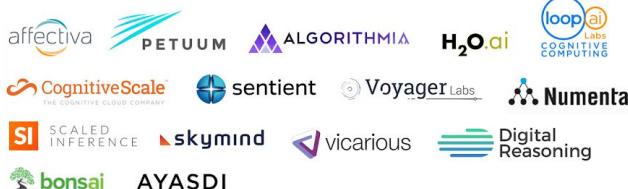
## CYBERSECURITY



## BUSINESS INTELLIGENCE & ANALYTICS



## CORE AI



## AD, SALES, CRM



## HEALTHCARE



## FINTECH & INSURANCE



## OTHER



## TEXT ANALYSIS/ GENERATION



## IOT/IOT



## COMMERCE



## Theme 3

Establish Clarity on Portfolio  
Strategy

# Portfolio Strategy

Short Term

Medium Term

Long Term

**Analytics Data**

**≠**

**Intelligent Product  
Data**

# Product Discovery

Demographics

Job-to-be-done

Pains and  
Opportunities

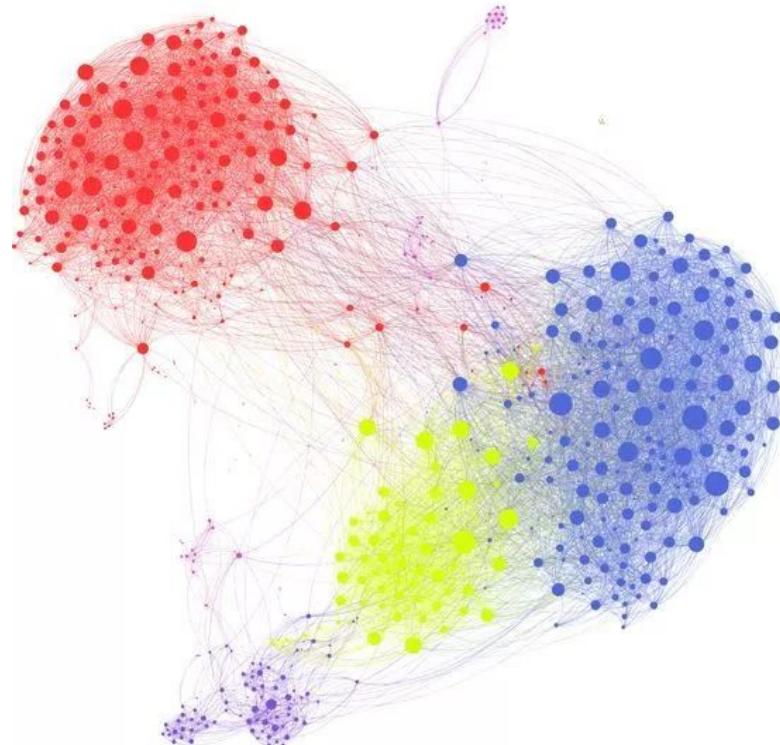


# Data Discovery

Patterns

Distributions

Models



# Common Practice

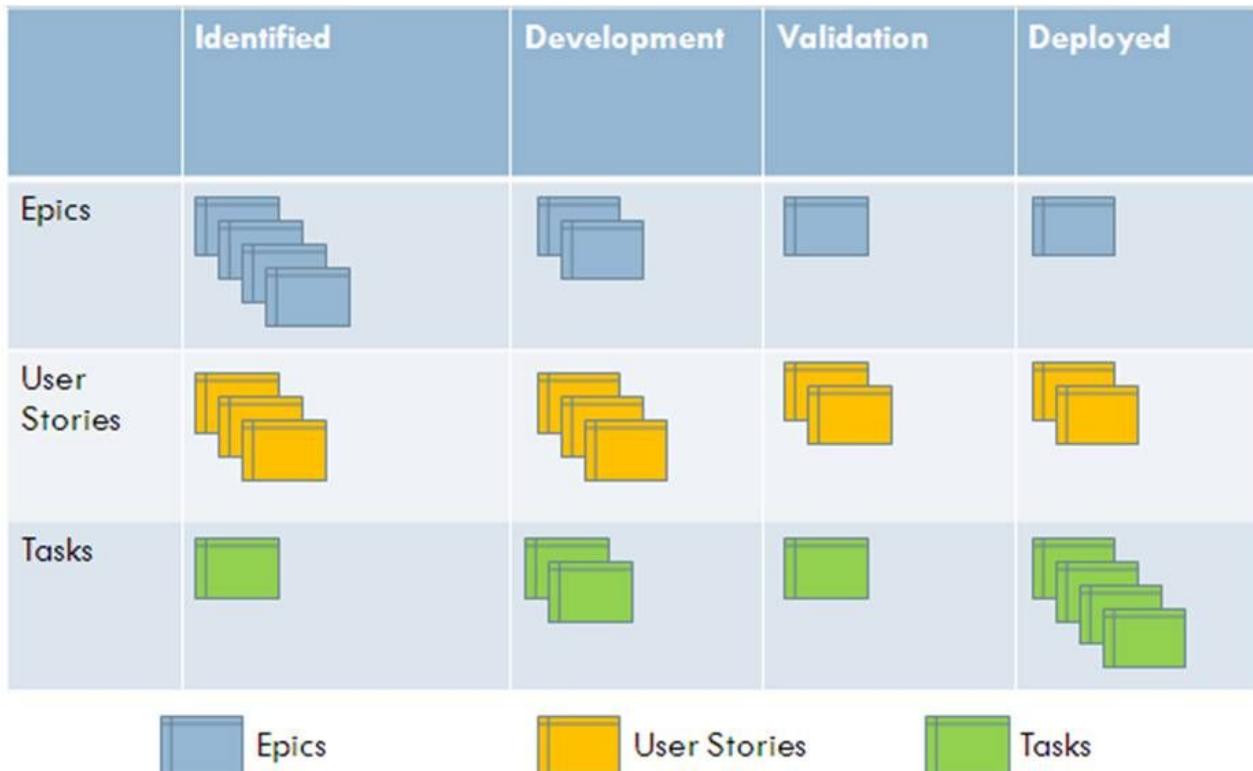
Data scientist  
conducts  
discovery  
independently

PM conducts  
discovery  
independently

# Best Practice

Shared customer  
understanding

# PM'ing the Data



A photograph showing three young adults in a collaborative workspace. A woman in the foreground, seen from the side, is writing on a whiteboard with a blue marker. Two men are standing behind her, looking at the board. The whiteboard is covered with numerous colorful sticky notes in various colors including pink, yellow, green, orange, and blue. The scene suggests a creative meeting or planning session.

## Discussion / Q&A

A photograph showing three people in a modern office setting, focused on a whiteboard covered with numerous colorful sticky notes. A woman in the foreground, wearing a plaid shirt, is writing on a note with a blue pen. Two men in the background, one in a light blue shirt and another partially visible, are observing the board. The scene conveys a sense of teamwork and creative planning.

# AI for Product Managers

# Appendix



# Deepen Familiarity with AI - NLP

AT&T LTE

4:47 PM



Hello Awesome Candidate, welcome to your Best Job Ever interview with Your Future Career.

Your interview will consist of:



4 Questions



About 10 Minutes



171.67 MB Upload



By continuing you agree to  
HireVue's Terms and Conditions



Recording

2:41

Describe a situation in which you effectively used your reasoning skills to handle something new or unfamiliar.



# Converting Words into Numbers

Resume 1 - Raw



“created new product”

Resume 1 - Numerical

create	1
new	1
product	1
design	0
lead	0
team	0
to	0
build	0

# Converting Words into Numbers

Resume 2 - Raw



“designed new product”

Resume 2 - Numerical

create	0
new	1
product	1
design	1
lead	0
team	0
to	0
build	0

# Converting Words into Numbers

Resume 3 - Raw



“led team to build product”

Resume 3 - Numerical

create	0
new	1
product	1
design	0
lead	1
team	1
to	1
build	1

# Converting Words into Numbers

Resume 3 - Raw



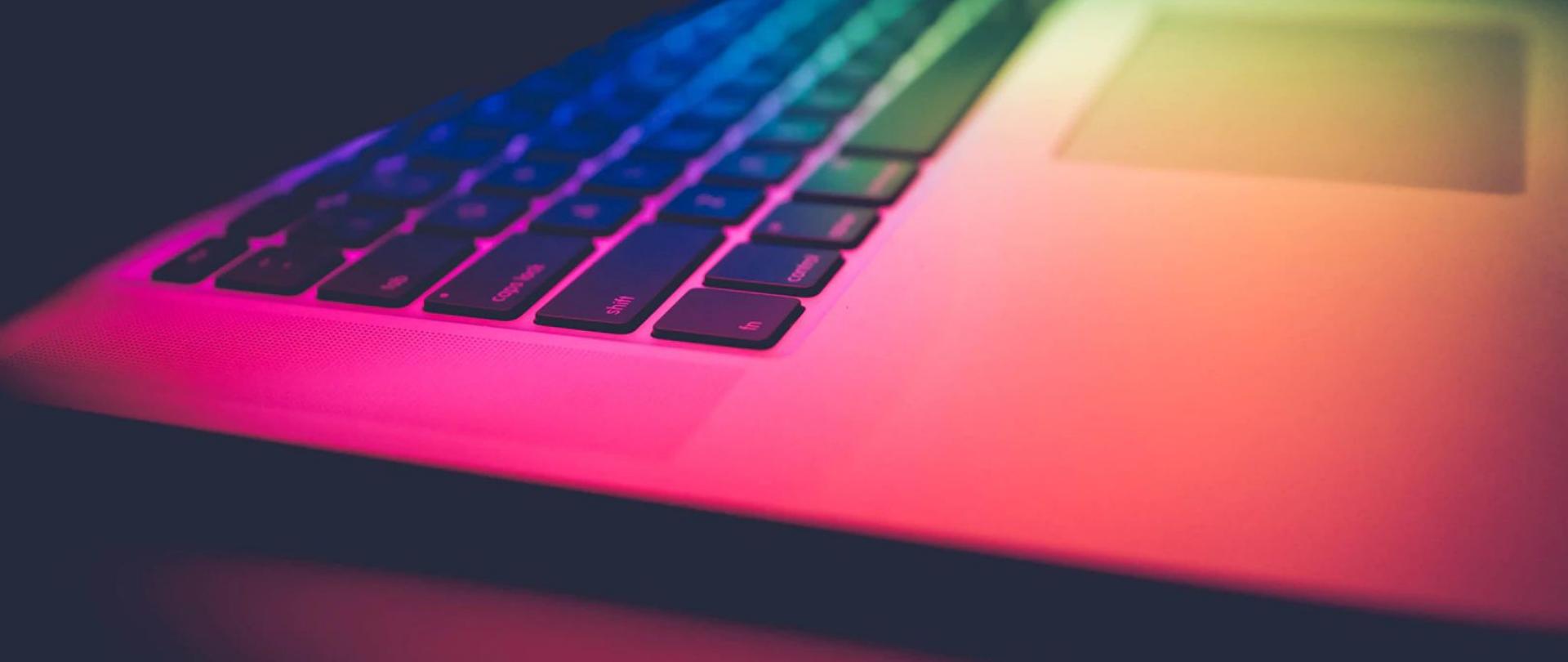
“led team to build product”

Resume 3 - Numerical

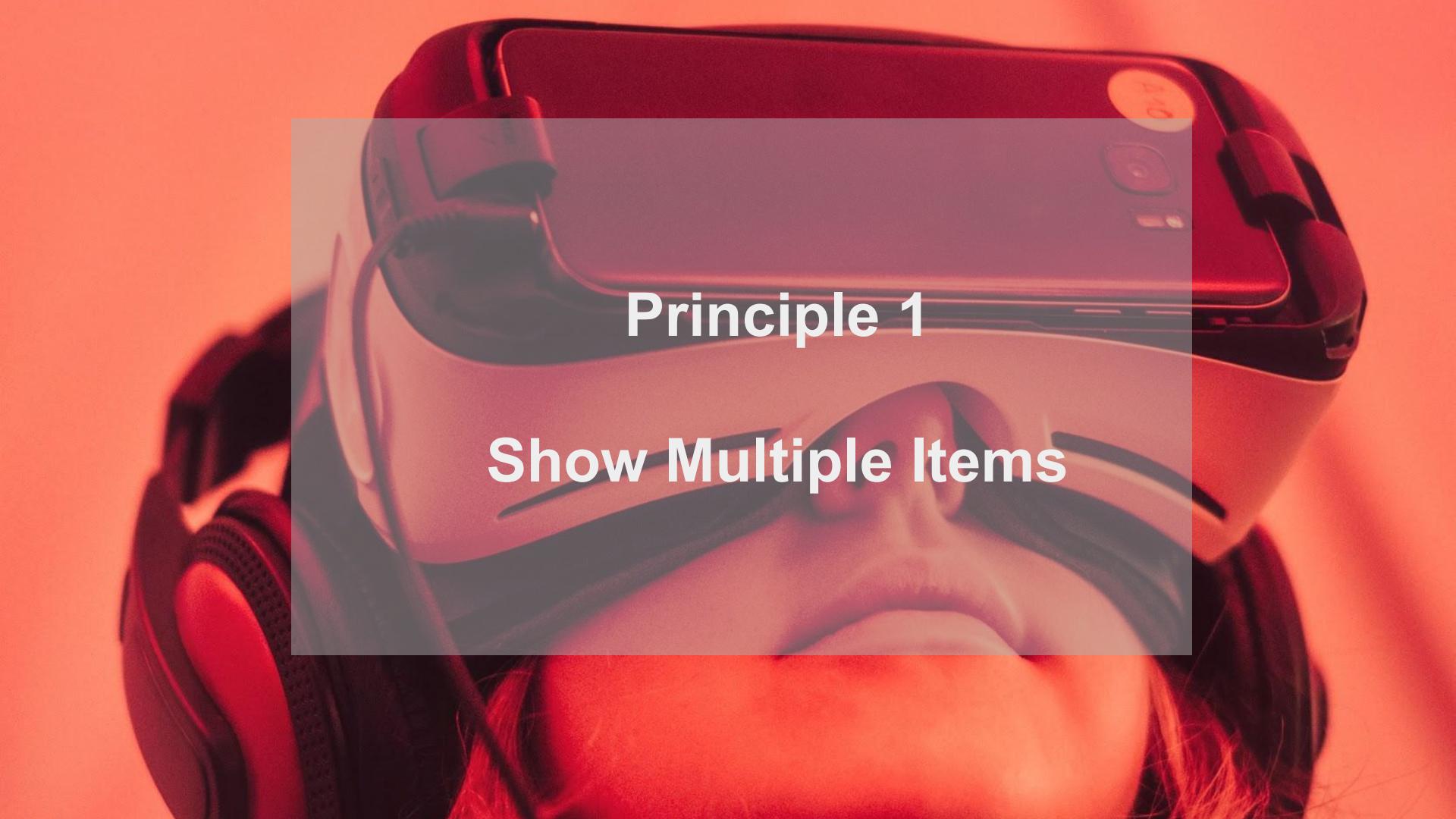
create	0
new	1
product	1
design	0
lead	1
team	1
to	1
build	1

# Example

	create	new	product	design	...	lead-team	team-build	Performance
Person 1	1	1	1	0	..	0	0	3
Person 2	0	1	1	1	..	0	0	2
Person 3	0	0	1	0	..	1	1	5
...	2	1	2	0	..	3	6	4
...	0	0	0	2	..	0	0	2



# More Design Principles of Virtual Assistants

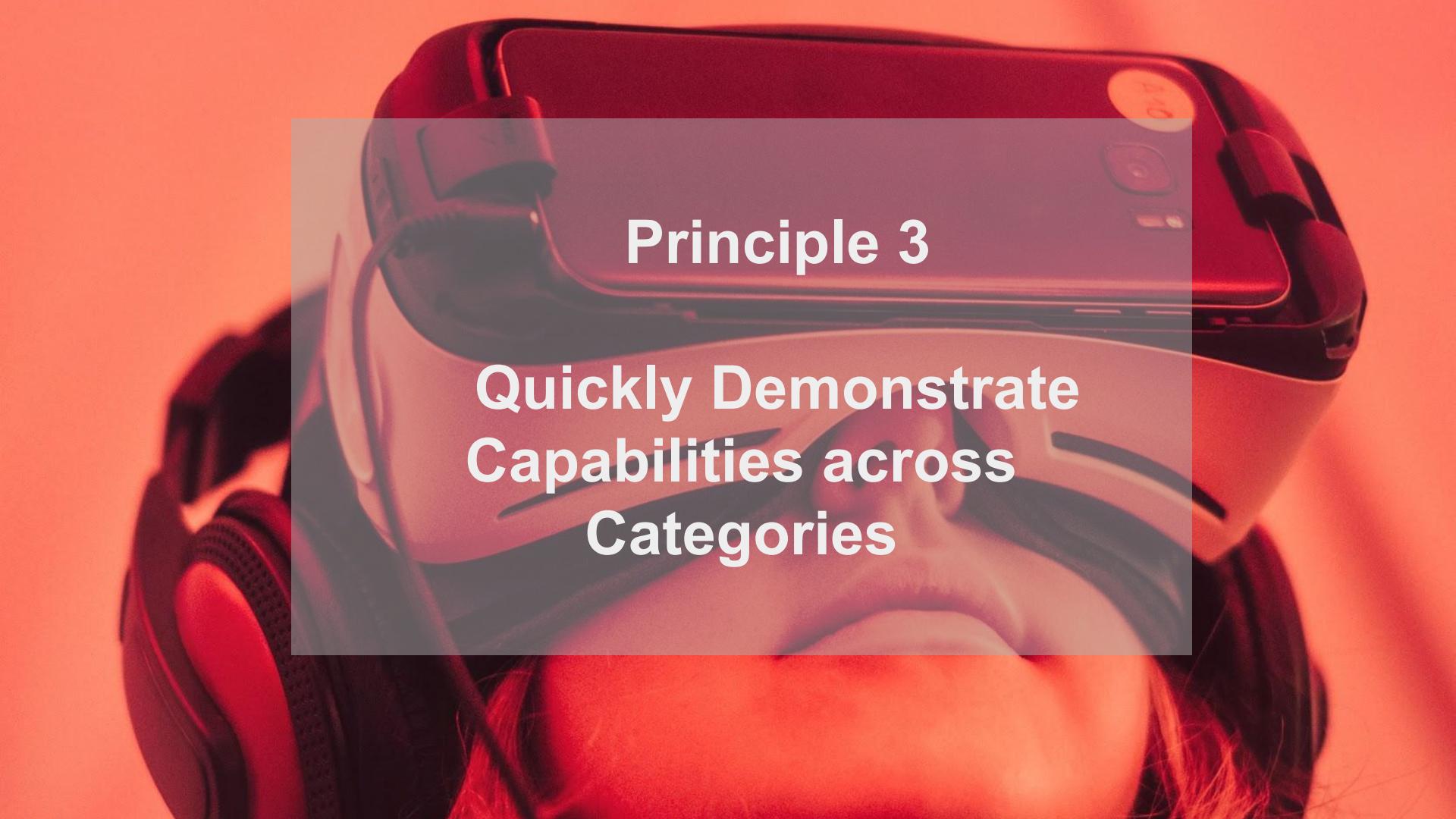
A photograph of a woman with dark hair wearing a white VR headset. She is looking down at a black smartphone held in her hands. The phone's screen is visible, showing a dark interface with some icons. The background is a warm, orange-red color.

**Principle 1**

**Show Multiple Items**

## Principle 2

Provide Short Succinct  
Previews

A photograph of a woman from the chest up, wearing a virtual reality headset. Her eyes are closed or heavily shadowed. A smartphone is held up in front of her face, its screen visible and displaying the text of the slide. The background is a warm, reddish-orange.

## Principle 3

Quickly Demonstrate  
Capabilities across  
Categories