

# How AI is crafting today's short-form video industry? in content area



**Professor: Mr.Valeriu Petrulian**

**Date: 25th May, 2022**

**Speaker:** (Introduction, AI in content  
production, Future)  
(Introduction, AI in content  
distribution, Conclusion)

# Outline

---

- 01 Introduction
  - 02 AI in Content Production
  - 03 AI in Content Distribution
  - 04 Conclusion & future preview
-

# 01 Introduction

---

# Introduction

I



2013: First

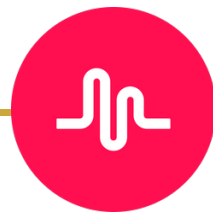
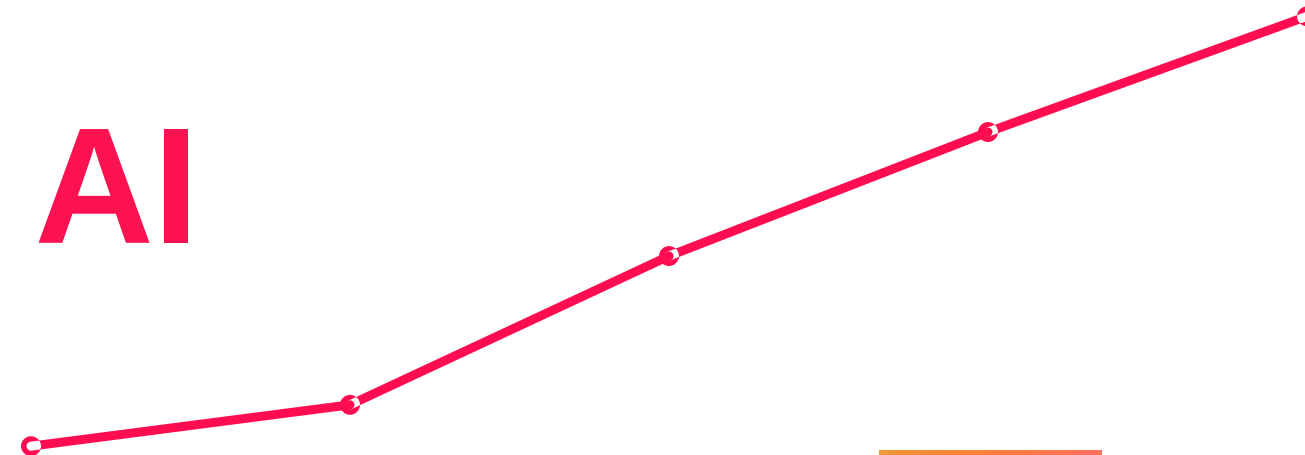
Vine: 6 seconds in length



2016.10

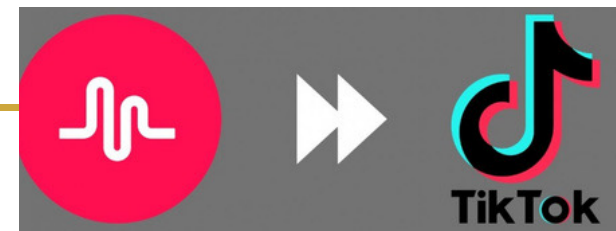
Vine: closure  
Instagram: launched Stories

AI



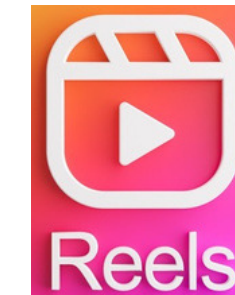
2014: Rise

Musical.ly : short (15 second to 1 minute long), lip-syncing, music videos



2017.5

Musical.ly was acquired by ByteDance and merged into TikTok



2020:  
Evolution

Instagram and Facebook introduced reels



# Introduction

- ◆ AI in Content Production

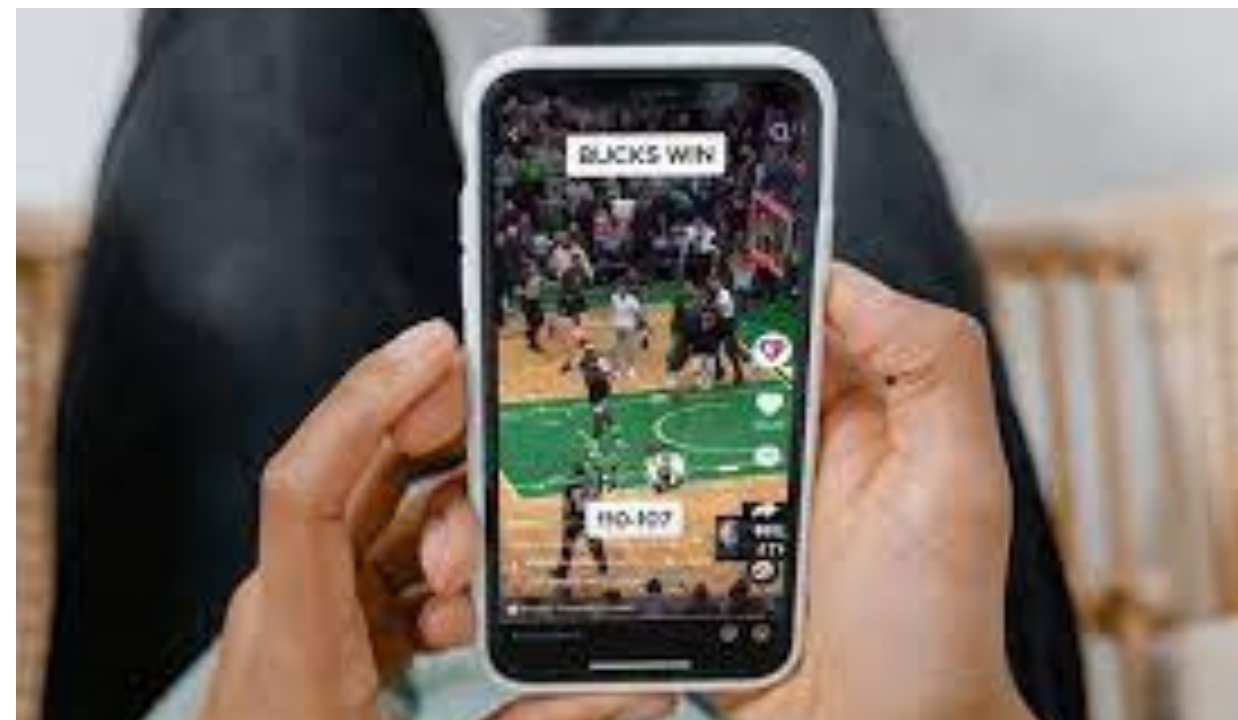
---

- ◆ AI in content understanding

---

- ◆ AI in content distribution

---



02

# AI in Content Production

---



# Basic

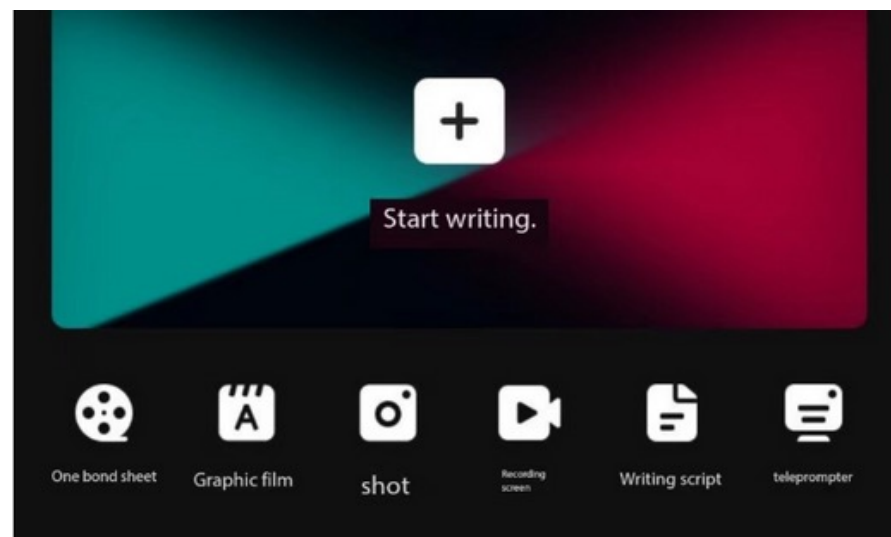
Face and body enhancement, automatic captioning, automatic voiceover

Traditional way: rely heavily on filter LUTs, require a lot of smoothing, filtering, etc.

Moore's law

AI way: faster video processing, more natural-looking

Other application: face attribute change, portrait stylisation, voice changing, AI singer



# Advanced

Dynamic simulation, magic object, AR/MR, smart video creation, virtual anchor

Magic object: use positional tracking, depth estimation and scene reconstruction to display virtual objects

Smart Creation: use cross-modal semantic matching, content understanding, speech synthesis, animation rendering

AI anchor: news broadcasting





# “Write-A-Video”







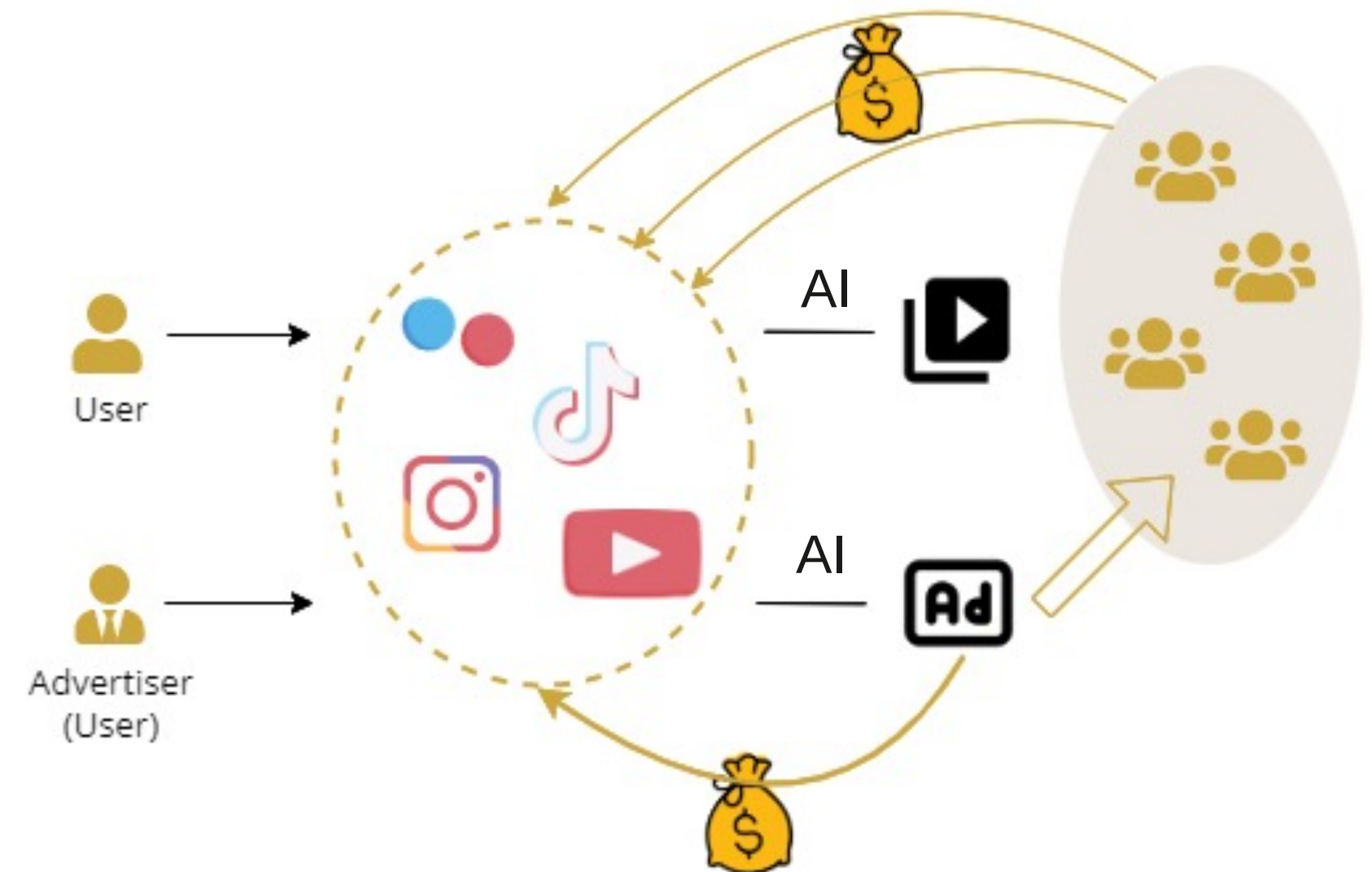
How can *AI* help make money  
?



# Ad-supported Video on Demand (AVOD)

II

- ✓ One-third of all online activity is spent watching videos (WordStream)
- ✓ 72% of customers said they would prefer to learn about a product or service via video (Optinmonster)
- ✓ 84% of customers said the brand's video convinced them to buy a product or service (Optinmonster)
- ✓ 86% of businesses now use video as a marketing tool (Wyzowl)
- ✓ Short-form video ad revenue will exceed \$10 billion by 2022



User

Quantity

Quality

# 03 AI in Content Distribution

---

# AI in Content Distribution

III

## Recommendation System(RS) Recommendation Algorithm (RA)

---

RS seeks to predict the "rating" or "preference" a user would give to an item(label).

"About 5 percent of the recommendations went to videos with fewer than 50,000 views. And about 64 percent of recommendations went to videos with more than a million views on Youtube." -- PEW RESEARCH CENTER

[https://en.wikipedia.org/wiki/Recommender\\_system](https://en.wikipedia.org/wiki/Recommender_system)

<https://www.theatlantic.com/technology/archive/2018/11/how-youtubes-algorithm-really-works/575212/>

# Short video industry without RA



## Vine

First created date: 2013;  
Closed date: October, 2016;  
Main reason of fail: Without updating new technology

<https://en.wikipedia.org/wiki/Vine>

[https://www.sohu.com/a/396831827\\_354120](https://www.sohu.com/a/396831827_354120)

---

## Snapchat

Feature: Old-fashioned video posting platform;  
Problem: The platform to post video does not have any interact function among users, which makes any video can not be labeled as "popular" as been seen by other than friends.

<https://en.wikipedia.org/wiki/Snapchat>

<https://www.163.com/dy/article/GPVUPQPB0537A6DD.htm>

# Changes with RA



## For Uploaders

---

- System of encouragement;
- e.g. Douyin (flow pool model)
- Help videos being distributed to a certain point;

## For Normal Users

---

- Recommend videos to users exactly;
- Avoid the so-called “junk” videos.

## For Company

---

- Attract more users;
- Higher retention;
- Higher the efficiency of user conversion;
- Above three: achieve the goal of sustained growth.



# 04 Conclusion & Future Preview

---

# Conclusion

---

1. Great changes: in content producing; understanding and distributing.
2. In content production part:
  - Save time, high efficiency
  - Assisted creation
  - Automatic generation

# Conclusion

---

- 3. In content distribution part:
  - RA : role of booster
    - Distributes videos;
    - Encouragement;
    - Popularizes app and company.
  - Without RA
    - Old-fashioned propaganda;
    - Meets bottleneck & failure.

# Future

## Large scale

- Mature AI + Big data + IoT
- Automated video production

---

## Decentralised recommendation

- More accurate present contents;
- Improve distribution efficiency.

---

## Breaking the boundaries of virtual reality

- Combination of VR and 3D short videos;
- With the help of 5G network;

# Thanks for Listening !

**Speaker: Yuanyuan LIU** (Introduction, AI in content production, Future)

**Haozhe TANG** (Introduction, AI in content distribution, Conclusion)

---