

# FAST FILM

“We want to enable the user to utilize their own emotional state to browse their personalized movie recommendations faster and without external research.”

This video is the capstone project report created by the participants of an *aggregate intellect* premium hands-on workshop. See <https://ai.science> for more details

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# The Brains



Jiri Stodulka

Data Scientist  
Product, Story, Modeling  
MLOps  
[www.jiristodulka.com](http://www.jiristodulka.com)



Zach Nguyen

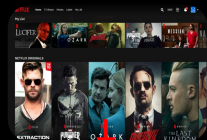
Data Scientist  
Product, NLP and UI  
Development.

2





- Movie Aficionado
- Watching time: 2h/day
- Age: 29
- 18 minutes with 50 titles



interactions



## External Reference

20% of viewing time  
spent on browsing



## Conventional Search

The user cannot browse by  
specific taste.

# MARKET SIZE

54 million

NETFLIX

180  
million

Global subscribers

searching

60%

Users browsing with  
external research

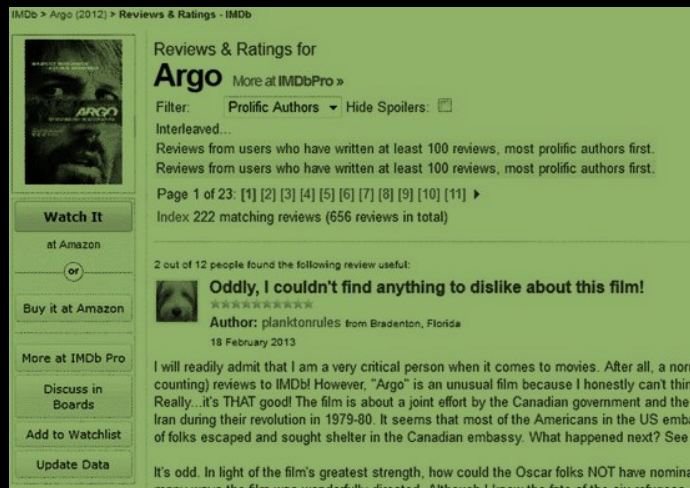
50%

Percentage of "picky"  
user



# Our Data Journey

- Available Data
- Data Wrangling
- Scraping Data
- Engineered Filters
- Engineered Ratings



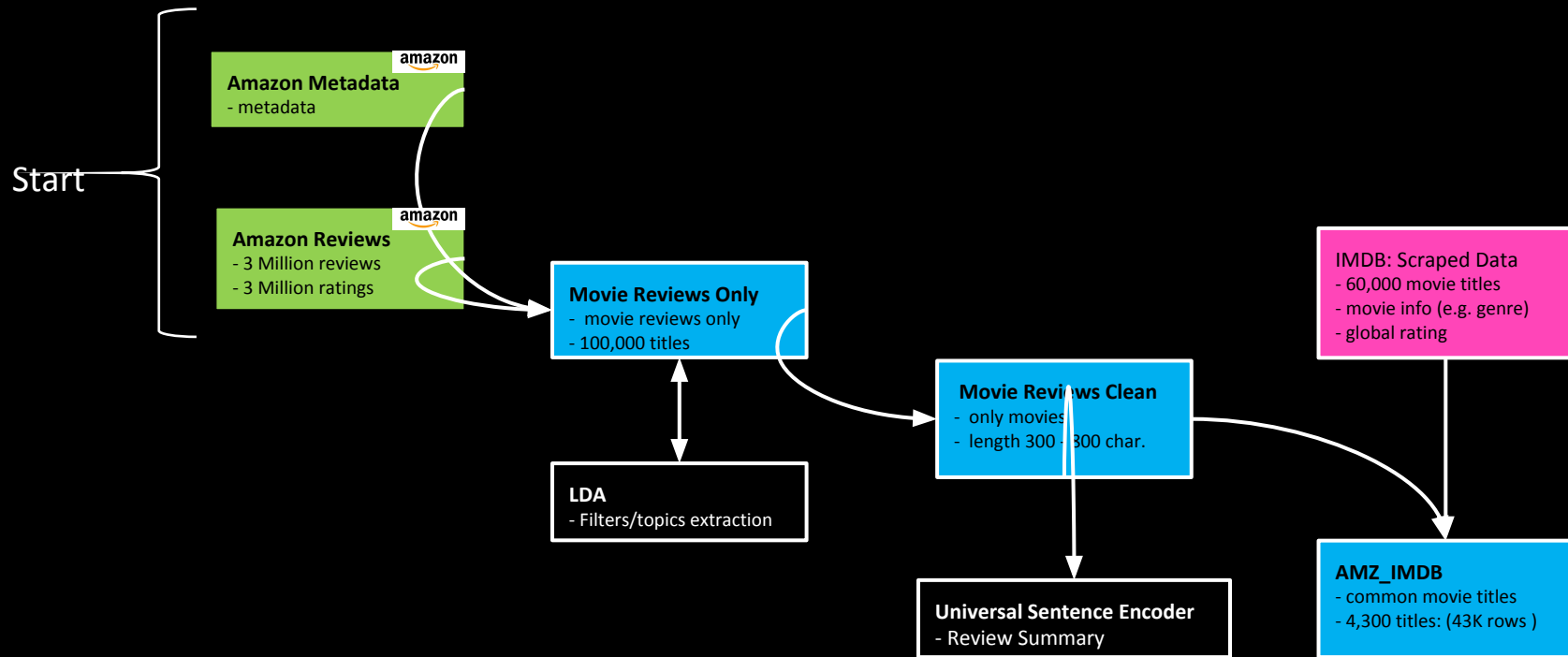
Filters

Movie Ratings

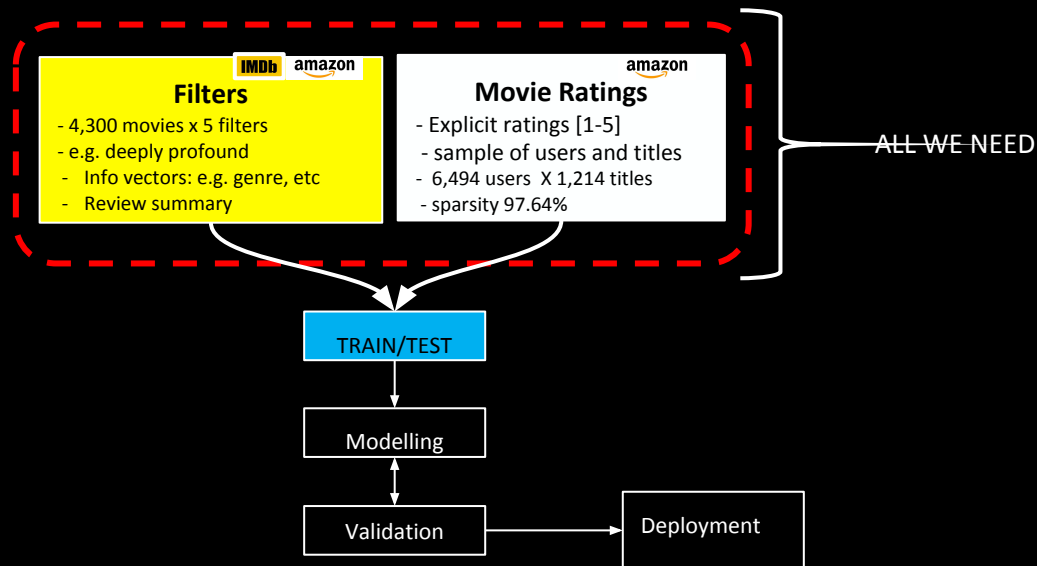
Aggregated  
Info

# In the Beginning was Amazon Reviews

- Available Data
- Data Wrangling
- Scraping Data

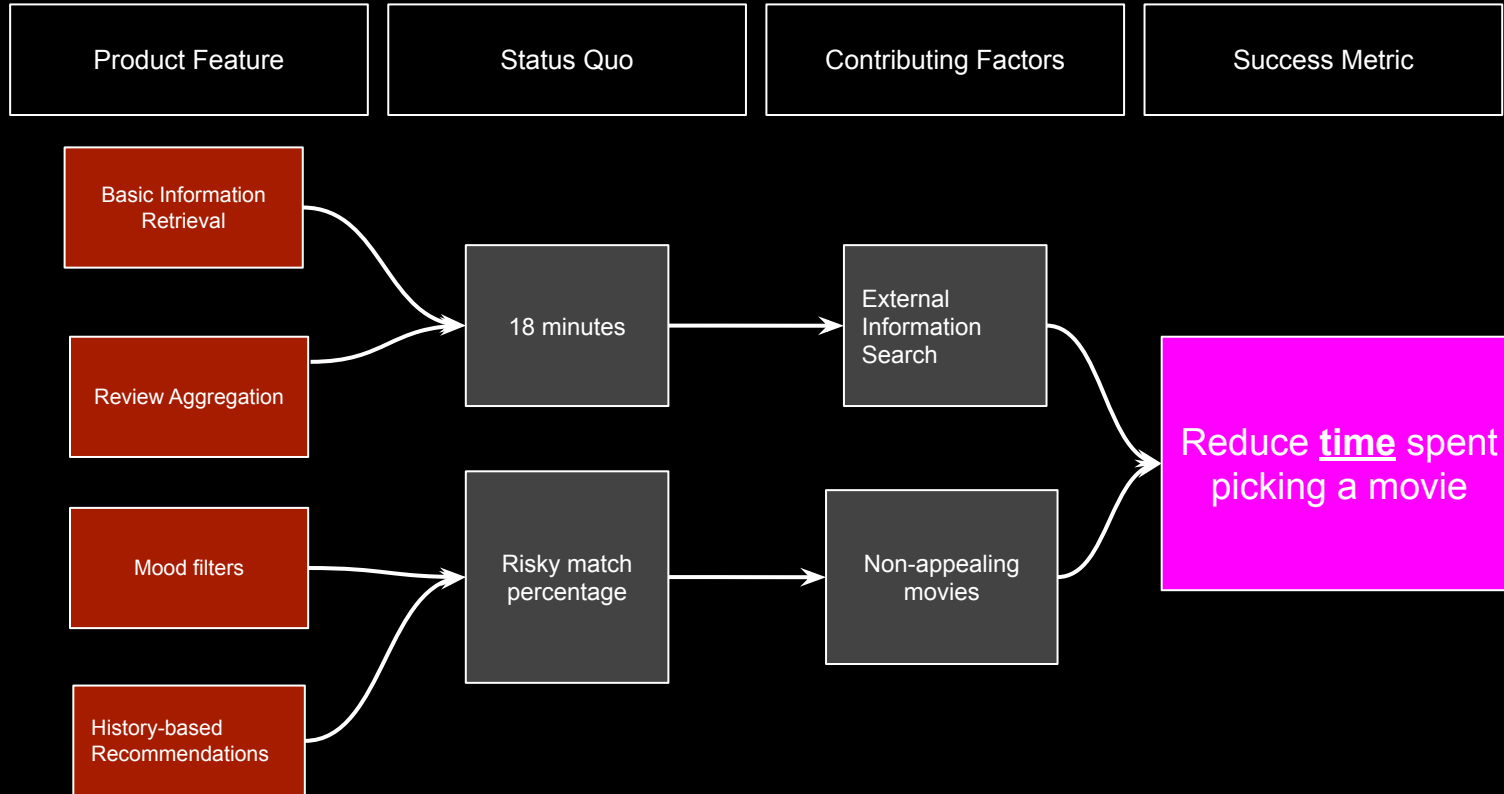


# ..and the Reviews Were Our Data

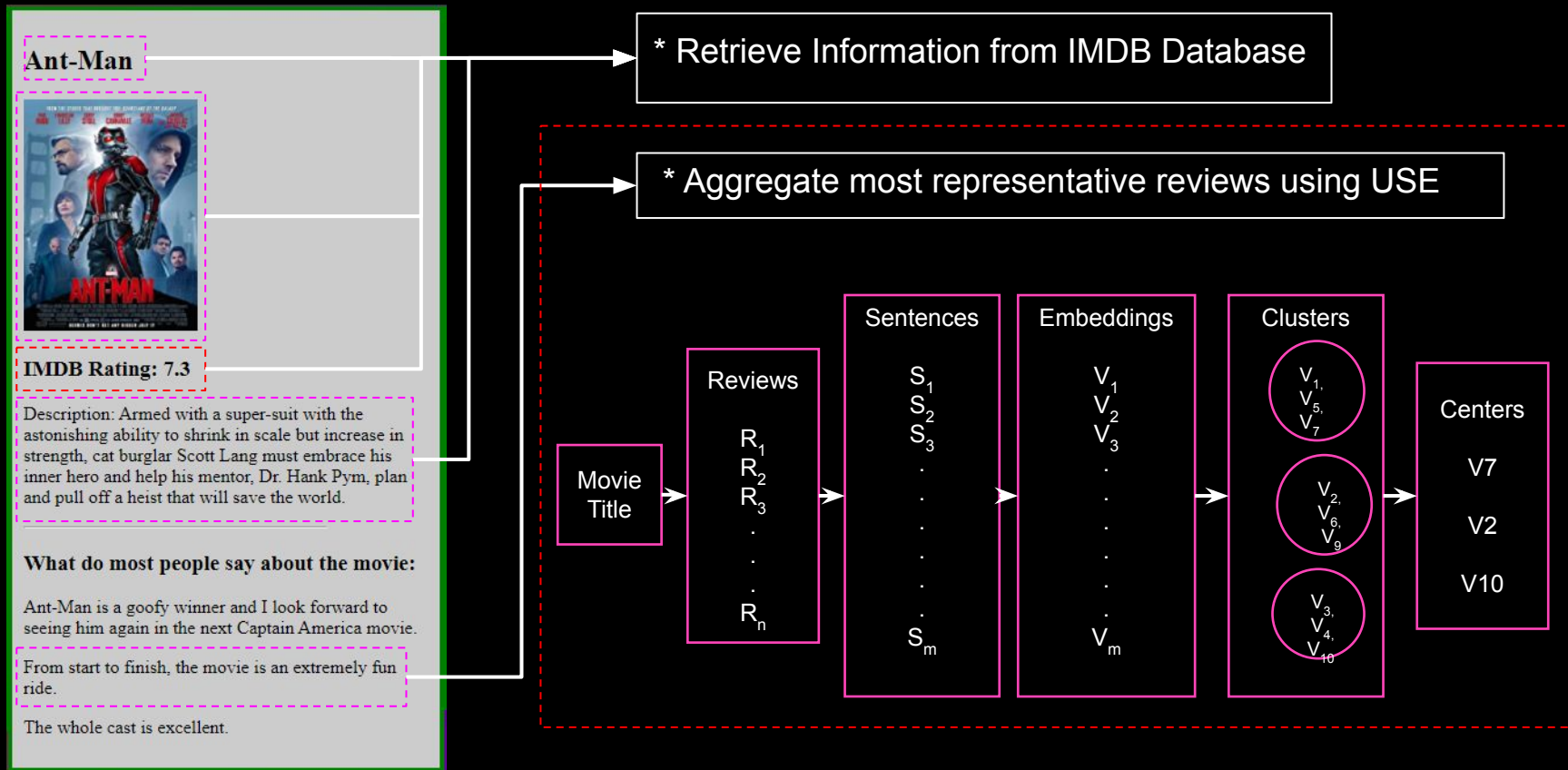




# Product Strategy



# Product Feature: Information Aggregation



# Product Feature: Recommendations

User  
Netflix  
History

$T_1$

$T_2$

$T_3$

.

.

.

.

.

.

$T_t$

MSD

1	0.5	0.3	0.4
0.8	1	0.7	0.3
0.3	0	1	0.4
0	0.2	0.3	1

$T_t \times (n - T_t)$

Pearson  
Correlation





1	0.5	0.3	0.4
0.8	1	0.7	0.3
0.3	0	1	0.4
0	0.2	0.3	1





$T_t \times (n - T_t)$





Cosine  
Similarity

1	0.5	0.3	0.4
0.8	1	0.7	0.3
0.3	0	1	0.4
0	0.2	0.3	1

$T_t \times (n - T_t)$

item  
freq.      
.5, .3, .2, .1

item  
freq.      
.8, .7, .3, .2

iid  
freq.      
.4, .1, .1, .0

RECOMMENDATIONS  
(sorted by relative  
freq.)



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# Product Feature: Emotional Filters



# Product Feature: Emotional Filters

Step  
2

Vectorize all movie  
titles

	Cinematographic Experience	Perfect! fun	Cheesy fun	Experience excitement	Diverse
Guardians of the Galaxy	3/10 = 30%	5/10 = 50%	2/10 = 20%	3/10 = 30%	1/10 = 10%
The Big Lebowski	0/10 = 00%	4/10 = 40%	1/10 = 10%	2/10 = 20%	2/10 = 20%
John Wick	3/10 = 30%	3/10 = 30%	2/10 = 20%	4/10 = 40%	1/10 = 10%
Skyfall	2/10 = 20%	0/10 = 00%	0/10 = 00%	5/10 = 50%	2/10 = 20%
.	.	.	.	.	.
.	.	.	.	.	.
.	.	.	.	.	.
Mad Max: Fury Road	3/10 = 30%	4/10 = 40%	1/10 = 10%	5/10 = 50%	1/10 = 10%

Step  
3:

Scaling  
g

MIN: 00%  
MAX: 30%

$f_{scaling}(\cdot)$

MIN: 00%  
MAX: 50%

$f_{scaling}(\cdot)$

MIN: 00%  
MAX: 20%

$f_{scaling}(\cdot)$

MIN: 20%  
MAX: 50%

$f_{scaling}(\cdot)$

MIN: 10%  
MAX: 20%

$f_{scaling}(\cdot)$

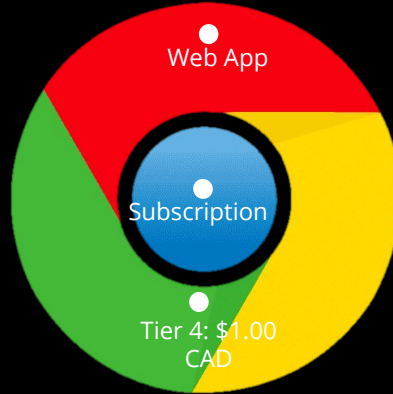
Filters on [0 - 5]  
scale

	Cinematographic Experience	Perfect! fun	Cheesy fun	Experience excitement	Diverse
Guardians of the Galaxy	5	5	2	0	0
The Big Lebowski	0	3	0	1	2
John Wick	3	2	2	3	1
Skyfall	2	0	0	5	2
.	.	.	.	.	.
.	.	.	.	.	.
.	.	.	.	.	.
Mad Max: Fury Road	5	3	0	0	1

# Business Strategy

Revenue	Amount
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Users per month	20,000
Subscription cost	\$1.00
Total Revenue	\$20,000

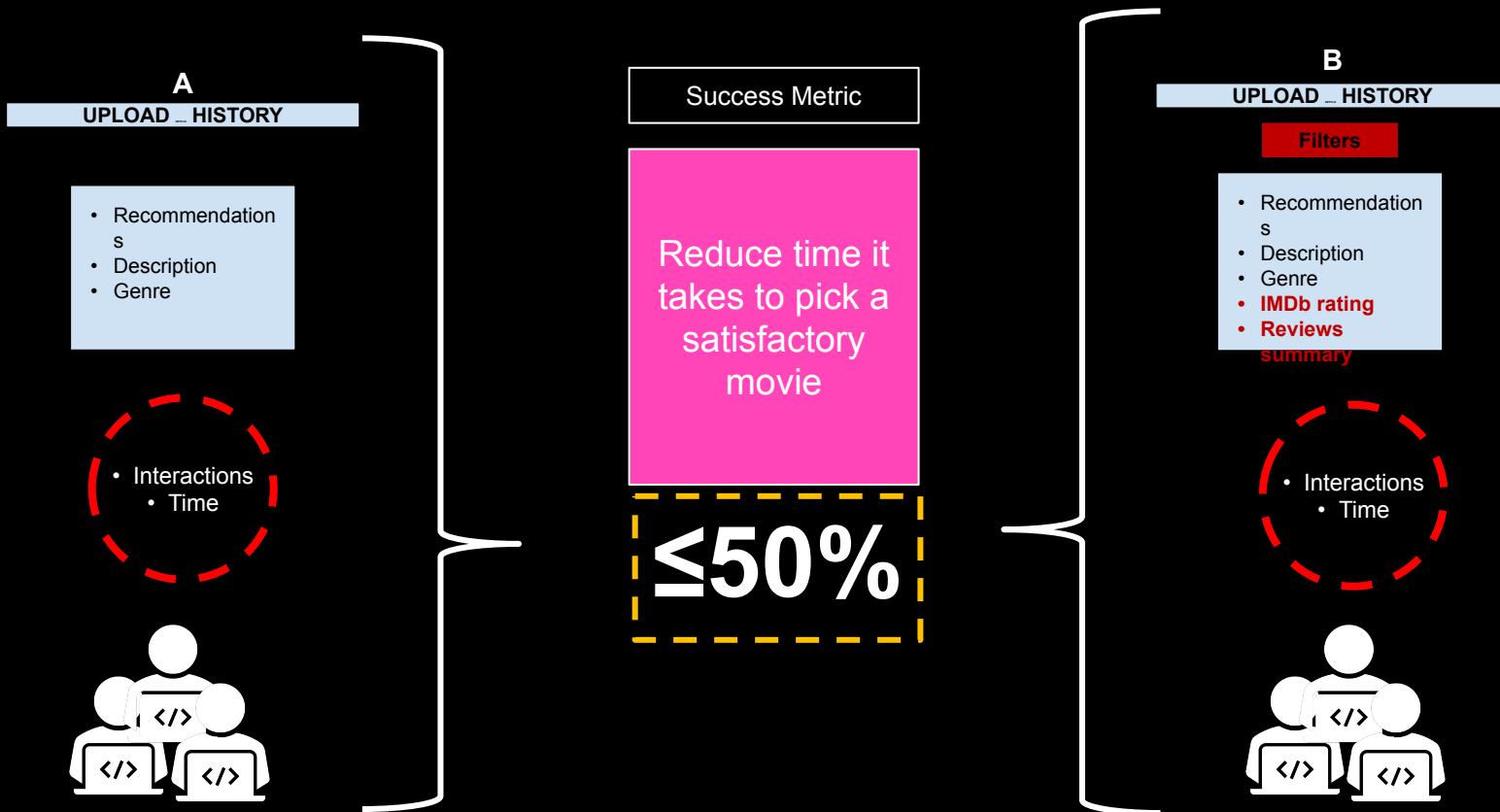


Cost	Amount
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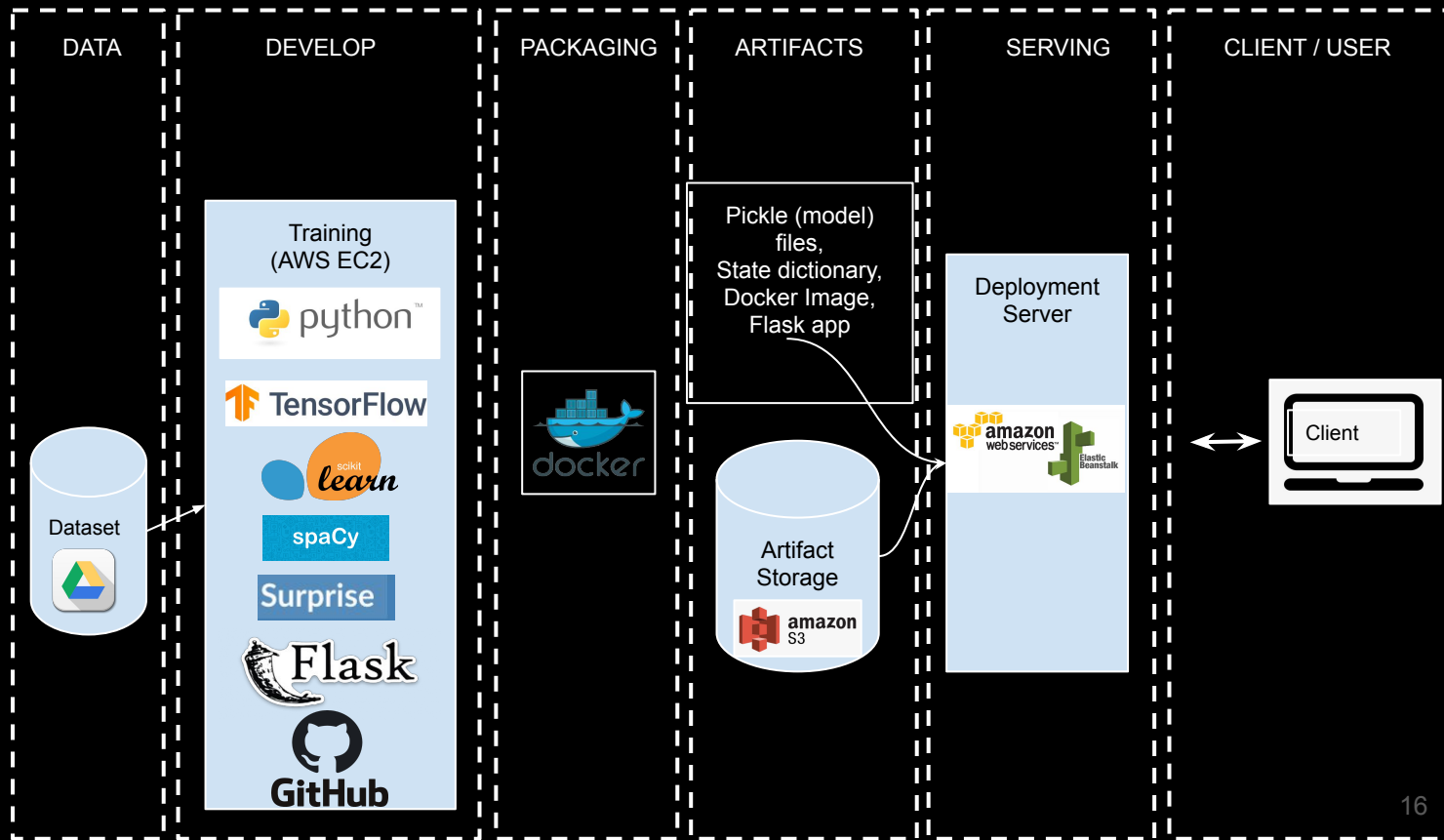
Google app	\$1,000
Cloud Server	\$100
Salaries	\$10,000
Total Cost	\$11,100

\$8,900/month

# A/B Testing






# Packaging and Development





# Learnings from Alpha & Beta Release: Behavioral Interview

User Segment	Time Spent 	Selection 	Ratings <b>IMDb</b>	Mood filters 
Relaxed Users	0-5 min	Top Movies	Not important	No need
Picky Users	10-30 min	External Source	Very important	Preferred more diverse



The app has **potential to save time** to the both users



**Tidy and clean UI** is important



Both users want to **display conventional information**



**Filters** must be **comprehensive**

# Future works

- A/B Testing, metric and evaluation of product
- Improve the Representative Reviews system
- Grow mood filters
- Expand Database to include more movies