

# **REAL Enjoyment Index**

**An Emotion-based Movie Ranker**

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# TEAM



**AI Engineer**

**Suresh, Priyanka  
Yadhav**



**Data Science  
Engineer**

**Dabas, Rashika**



**Full Stack  
Developer**

**Dimaculangan,  
Roan Katrina J.**



**ML Engineer**

**Ip, Chak Leung  
Vincent**

# AGENDA

## Business

- 1 Problem Statement
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- 3 Our Approach
- 4 Financial Plan
- 5 SWOT Analysis

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# PROBLEM STATEMENT

- Major Awards: Oscars, Berlinale, Venice FF, Cannes FF, TIFF
  - **Old-fashioned:** Voting/ Reviews/ Surveys (since 1929, Oscars)
  - **Criticisms:** biased, discrimination, scandals, controversies
  - **Losing recognition** from the public
- People trust more in Data-driven intelligence, e.g. YouTube views
- New technologies arise – AI Emotion Detection



tiff



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Entertainment  
Why weren't Barbie's director and lead actress Kenough for Oscar nominations?  
Barbie was nominated for 8 Academy Awards, but Greta Gerwig and Margot Robbie were passed over  
Natalie Stechysen - CBC News - Posted: Jan 24, 2024 4:25 PM EST | Last Updated: January 25

The Scandal and the Glory of the 2003 Oscars  
On this week's Little Gold Men podcast, a look back at an awards show that made history for the right and wrong reasons  
THE AWARDIST LITTLE GOLD MEN  
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Entertainment TV MOVIES MUSIC WHAT TO WATCH BINGE CELEBRITY THE AWARDIST BOOKS THEATER  
Oscars 2024: 7 most controversial movie wins in Academy Awards history!  
Entertainment TV MOVIES MUSIC WHAT TO WATCH BINGE CELEBRITY THE AWARDIST BOOKS THEATER  
THE AWARDIST > EMMYS

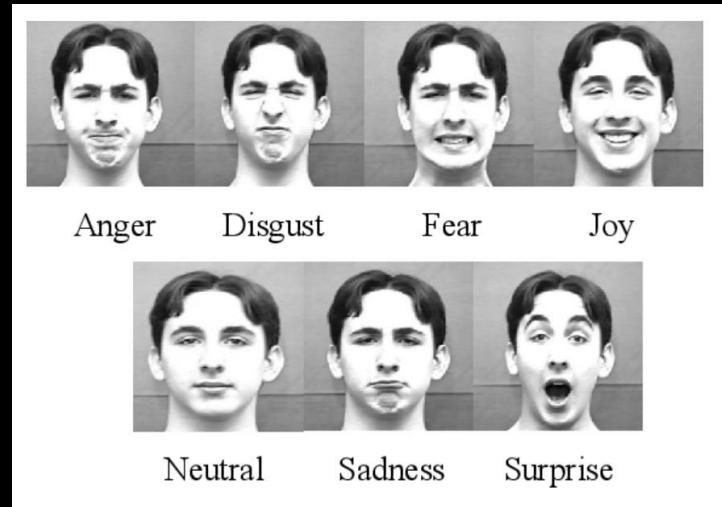
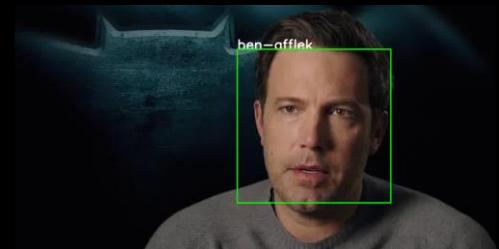
Stars who've never won an Emmy but should have  
These great performers were surprisingly snubbed by the Emmys.  
By EW Staff Updated on January 16, 2024 11:55AM EST  
Advertisement

# PROPOSED SOLUTION

- Establish a Movie Ranker using **Face Recognition** and **Emotion Detection** technology
- Devices set up at all theatres capturing faces of all audience throughout entire movie
- Algorithm representing **reactions from all audience**

## Benefits:

- **State-of-the-art** – Utilizing latest AI and Big Data technology in establishing a reliable indicator
- **Objective** – Taking into consideration reactions from every audience
- **Unbiased** - Covers a wide representation for all ages, genders, races etc.
- **Trust from public** – Generations of the new world establish more trust in data-driven indicators

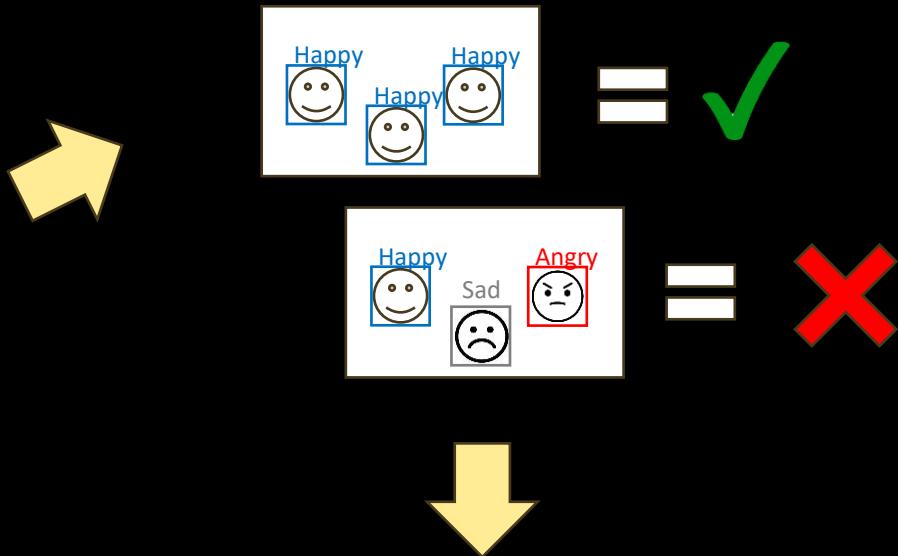


# OUR APPROACH

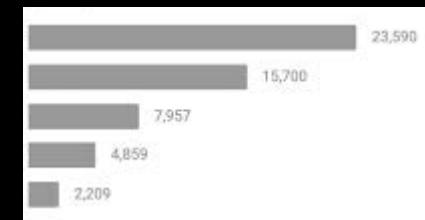
- ① Using AI Face Recognition and Emotion Detection Technology to capture audience emotions



- ② Algorithms calculating the Enjoyment score  
Version 1 algo: S.D. for each frame

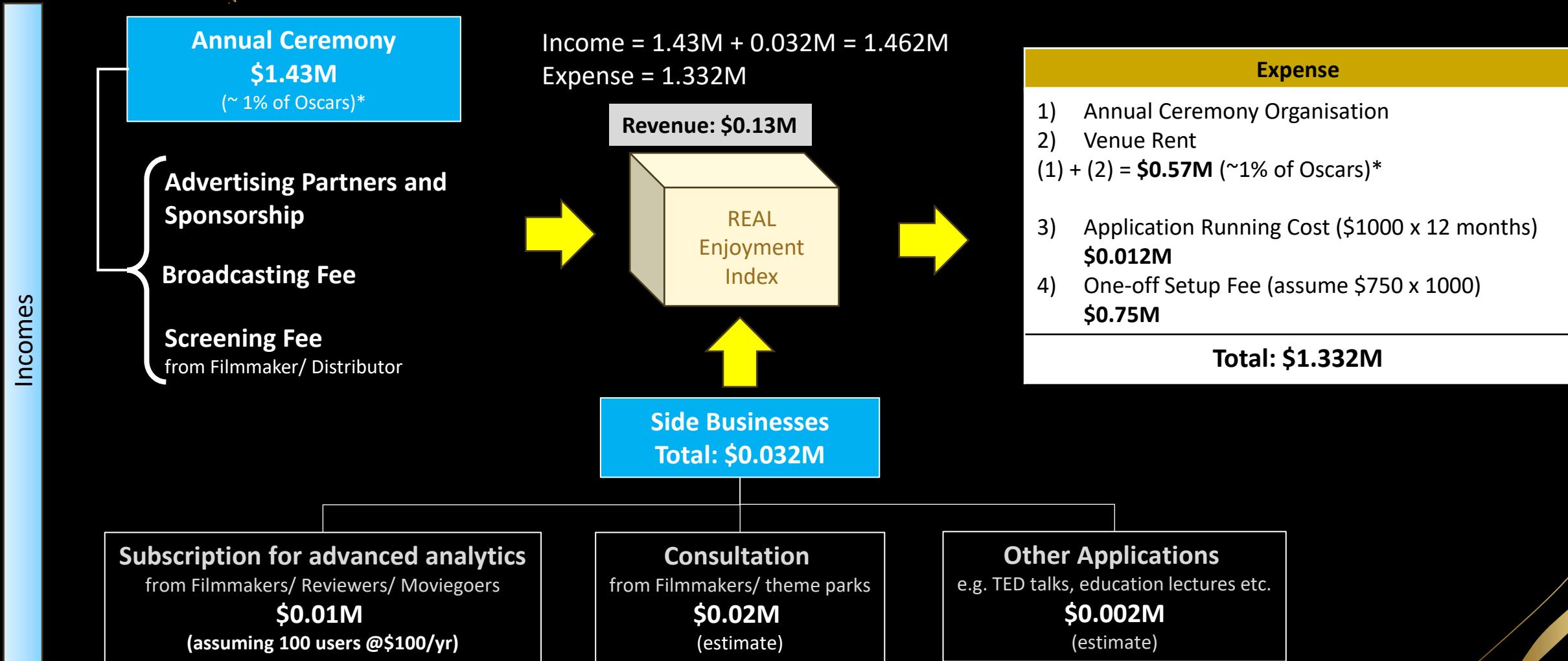


- ③ Rankings of Movies



For 1<sup>st</sup> financial year:

# Financial Plan



# Strengths

- Unique data collection tool for film industry
- Offers valuable insights for various stakeholders
- Enhances movie-going experience for people



# Weaknesses

- Requires user adoption within the target market (studios and filmmakers)
- May face privacy concerns regarding audience recording
- Limited functionality in theatres with strict recording policies
- Darkness affecting recording quality

# Threats

- Existing audience reaction data collection methods (surveys and test screenings)
- Legal challenges regarding privacy rights
- Competition from similar apps with new features

# Opportunities

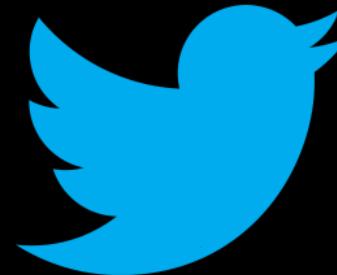
- Partnership with studios for data collection
- Integration with existing movie review platforms
- Expansion to other forms of entertainment (like live theatre, lectures or sporting events)

# Market Research – Current Movie Rating Mechanisms

## Online Review Platforms



## Social Media

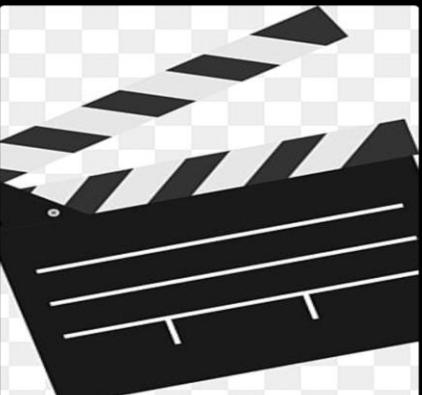


## AI and ML



# CINEPULSE BY EMOPULSE

See the movie. Feel the moment



## Live Movie Review

Click to start live review and see real-time enjoyment analysis.



## Inception

A thief who steals corporate secrets through the use of dream-sharing technology.

Release Year: 2010



## Interstellar

A team of explorers travel through a wormhole in space in an attempt to ensure humanity's survival.

Release Year: 2014



## The Matrix

A computer hacker learns from mysterious rebels about the true nature of his reality and his role in the war against its controllers.

Release Year: 1999

17-19

OCTOBER 2027

7 PM - 11 PM

AT RIMBERIO PARK,

123 ANYWHERE ST., ANY CITY

ONLY  
**\$8.00**  
FOR EACH  
MOVIE!



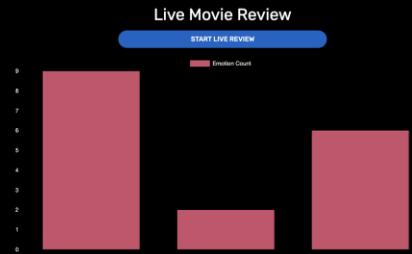
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AT RIMBERIO PARK,  
123 ANYWHERE ST., ANY CITY



Upload for Movie Analysis

Choose Files

SUBMIT VIDEOS

# Product Description

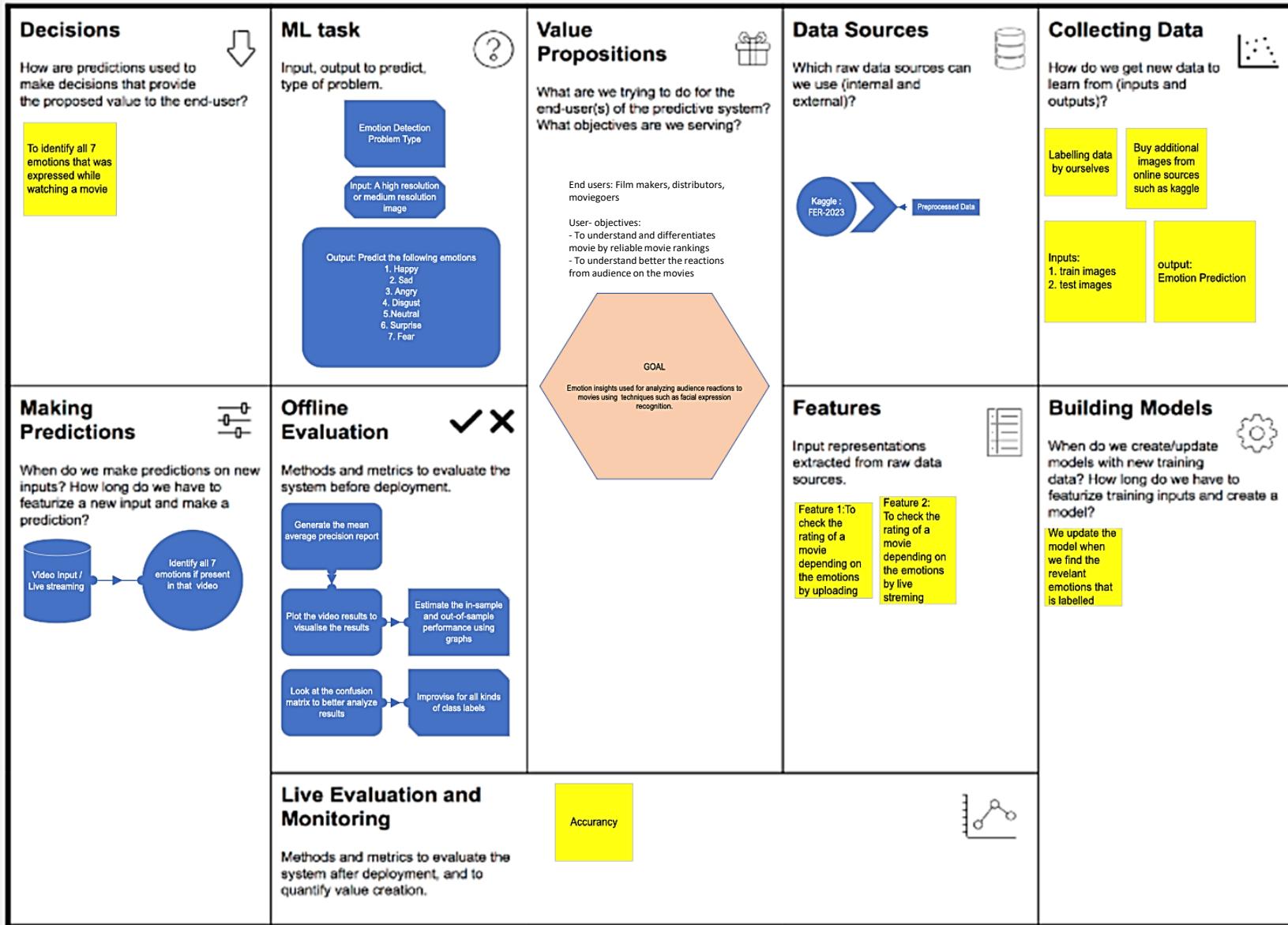
A cutting-edge application designed to capture and analyze real-time emotional responses from moviegoers using facial recognition technology.

Its purpose is to provide filmmakers and cinemas with immediate insights into the emotional impact of their films, enhancing their ability to gauge success directly and in real-time.



# ML Canvas

## The Machine Learning Canvas



# MODEL BENCHMARKING

Model: "sequential"

Layer (type)	Output Shape	Param #
conv2d (Conv2D)	(None, 46, 46, 32)	320
conv2d_1 (Conv2D)	(None, 44, 44, 64)	18,496
max_pooling2d (MaxPooling2D)	(None, 22, 22, 64)	0
dropout (Dropout)	(None, 22, 22, 64)	0
conv2d_2 (Conv2D)	(None, 20, 20, 128)	73,856
max_pooling2d_1 (MaxPooling2D)	(None, 10, 10, 128)	0
dropout_1 (Dropout)	(None, 10, 10, 128)	0
conv2d_3 (Conv2D)	(None, 8, 8, 256)	295,168
max_pooling2d_2 (MaxPooling2D)	(None, 4, 4, 256)	0
dropout_2 (Dropout)	(None, 4, 4, 256)	0
flatten (Flatten)	(None, 4096)	0
dense (Dense)	(None, 512)	2,097,664
dropout_3 (Dropout)	(None, 512)	0
dense_1 (Dense)	(None, 7)	3,591

Total params: 2,489,095 (9.50 MB)

Trainable params: 2,489,095 (9.50 MB)

Non-trainable params: 0 (0.00 B)

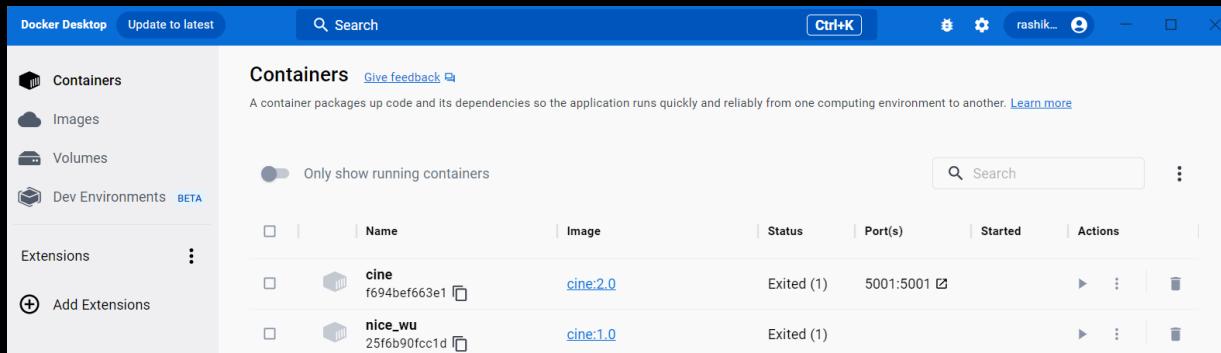
```
print('Accuracy = ',metrics.accuracy_score(test_labels,predictions))
```

Accuracy = 0.65625



# MODEL DEPLOYMENT

- Dockerization
- Deployment to GCP



The screenshot shows the GCP console with a tab for 'full-stack-instance'. It has tabs for DETAILS, OBSERVABILITY, OS INFO, and SCREENSHOT. Under DETAILS, it says 'Spot VMs may be terminated at any time.' and shows 'SSH' and 'CONNECT TO SERIAL CONSOLE' buttons. Below that, it says 'Connecting to serial ports is disabled.' Under the 'Logs' section, there's a 'Logging' section for 'Serial port 1 (console)' with a 'SHOW MORE' button. The 'Basic information' section contains the following details:

Name	full-stack-instance
Instance Id	2098728200261817384
Description	None
Type	Instance
Status	Running
Creation time	Apr 16, 2024, 5:16:58 PM UTC-04:00
Zone	us-west4-b
Instance template	None
In use by	None

**DEMO**

A decorative border on the left and right sides of the slide consists of thin, gold-colored lines that resemble the edges of dried leaves or petals. These lines are slightly curved and overlap each other, creating a natural, organic frame. In the top-left and bottom-right corners, there are larger, more prominent clusters of these gold leaf-like shapes, with some containing small, glowing gold dots.

Thank You!