

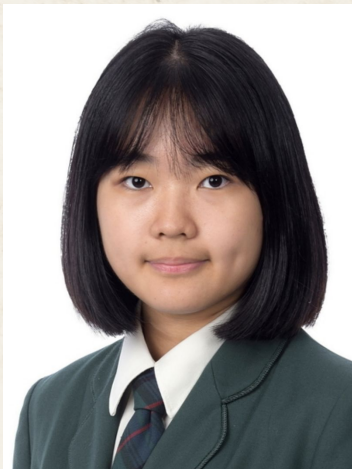
IntelliOr

Team Members:

Mina Sung, Hyoyeon Lee, Juhee Lee



Our team



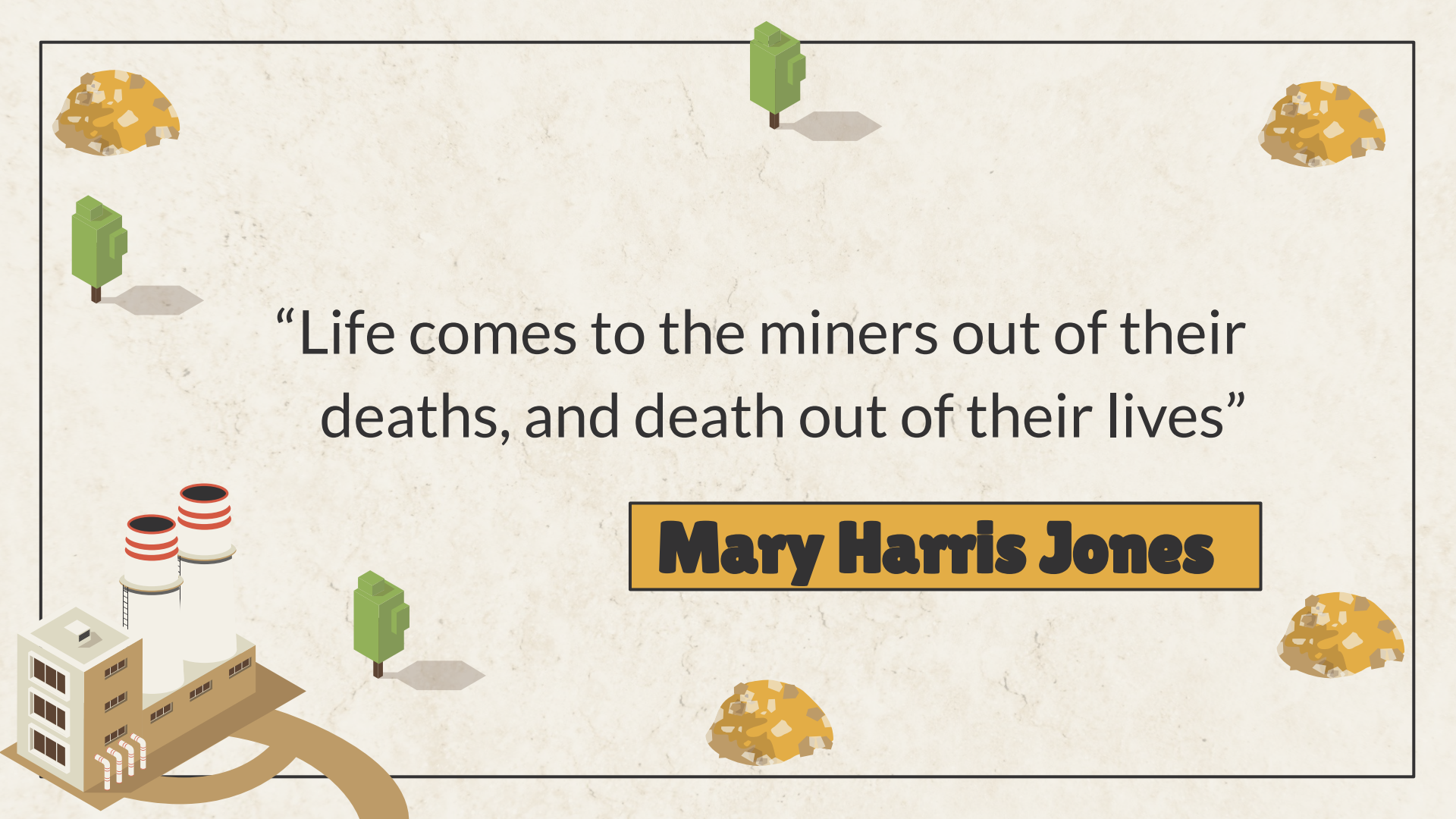
Mina Sung



Hyoyeon Lee



Juhee Lee



“Life comes to the miners out of their
deaths, and death out of their lives”

Mary Harris Jones

“Predict, Prevent, Protect”

intelliore



"Predictive maintenance application"

AI-powered

Machine malfunctions

Alert sendings





Mission

*To provide an AI service to
promote the safety of workers in
the mining sites.*

Vision

*To build a world where AI ensures
the safety and wellbeing of all
mining workers.*

Competitors



HiQ

HiQ provides maintenance operations for a global mining machinery manufacturer using an AI-powered predictive system.

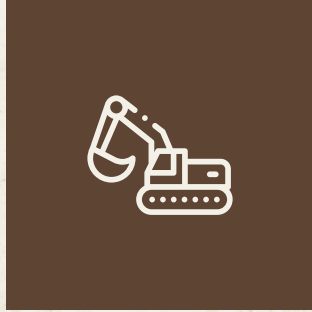


Mine Guard AI

Mine Guard AI

Mine Guard AI provides software solutions to enhance safety and efficiency in the mining industry using AI

Impact s



Lower Operational Costs

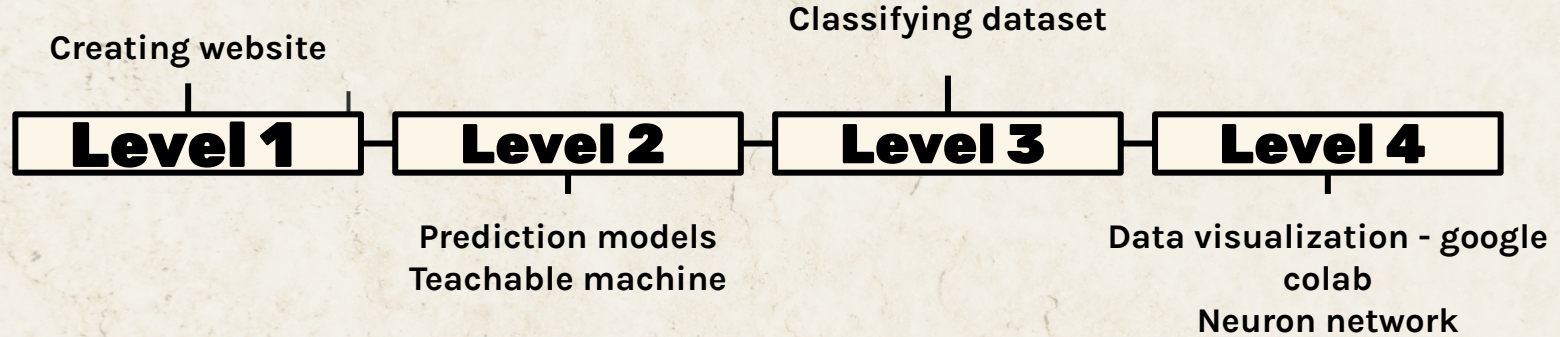
Minimizes downtime and
emergency repairs of equipments,
efficient use of resources



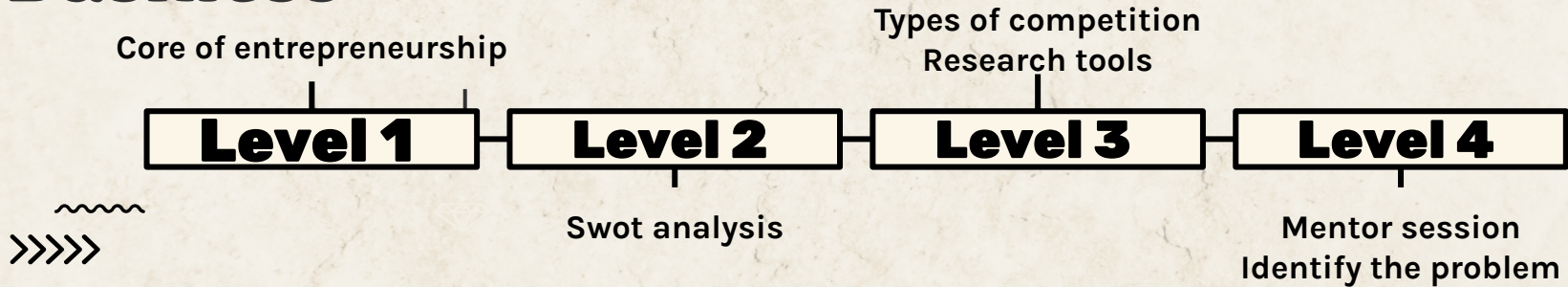
Improved Safety

Prevents accidents caused by
sudden equipment breakdowns

Tech



Business



Tools We've Learned



HTML & CSS

- Website

Teachable
Machine

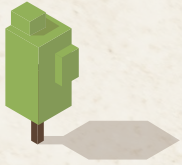
Teachable Machine

- AI-based model

Google
colab

Google Colab

- Data collection
- Data visualization
- Predictive model



What Next?

Finalize Idea

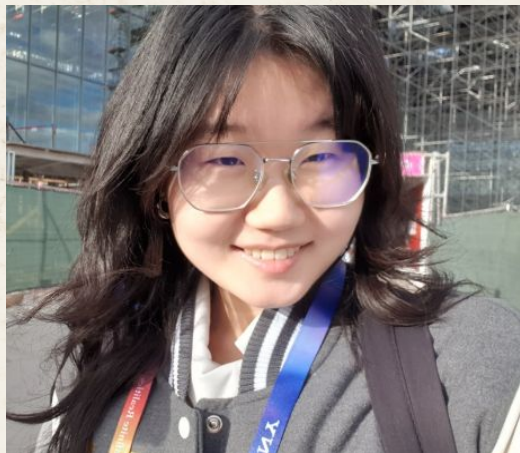
Research Tech



Tech + Business



Our coaches



Gahyun Park



Ella



**Yoonjung
Lee**

Our Mentor



James Nickels



Thanks!

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Mina

Website

Teachable Machine

Google Colab

```
<!DOCTYPE html>
<html>
  <head>
    <meta name="viewport" content="width=device-width,
      initial scale=1.0">
    <link rel="stylesheet" href="styles.css">
    <script type="module" src="script.js"></script>
    <title>Mina's Homepage </title>
  </head>
  <!-- HTML comment -->
  <body>
    <nav>
      <a href="#welcome"> Welcome </a>
      <a href="#about"> About me </a>
      <a href="#dog"> My dog </a>
      <a href="#food"> My favorite food </a>
      <a href="#issues"> Interested issues </a>
      <a href="#hobbies"> My hobbies </a>
      <a href="#contacts"> Contacts </a>
      <a href="https://www.youtube.com/watch?v=c6P8Waj
        =u0uKqB_channel=SR00w" target="_blank"> My
        Favorite music</a>
    </nav>
    <section id="welcome">
      <h2> Welcome to my website, so gald to have you! </h2>
    </section>
    <section id="about">
      <h2> About me </h2>
      
    </section>
  </body>
</html>
```

WELCOME ABOUT ME MY DOG MY FAVORITE FOOD
INTERESTED ISSUES MY HOBBIES CONTACTS
MY FAVORITE MUSIC

Welcome to my website, so gald to have you!

About me

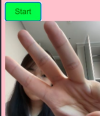


Hello! My name is Mina Sung, and I am a 10th grader. I am currently in Aju, South Korea, and I study at Brankome Hall Asia. I am really passionate about technology and business. I am excited to building innovative solutions that make a difference in our community.

My Dog

```
<!DOCTYPE html>
<html>
  <head>
    <link rel="stylesheet" href
      ="my_model.css">
    <script src="my_model.js">
      </script>
    <script src="https://cdn
      .jsdelivr.net/npm
      /tensorflow/tfjs@latest
      /dist/tf.min.js"></script>
    <script src="https://cdn.jsdelivr.net
      /npm/@teachablemachine/image@latest
      /dist/teachablemachine-image.min
      .js"></script>
    </head>
    <body>
      <h2>Teachable Machine Image
        Model</h2>
      <button type="button" onclick
        ="init()">Start</button>
      <div id="webcam-container">
        </div>
      <div id="message"></div>
      <div id="label-container"></div>
    </body>
  </html>
```

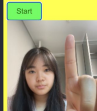
Teachable Machine Image Model



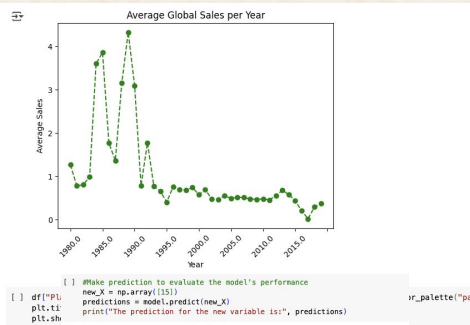
100% Acc
10000
100.00%

```
<!DOCTYPE html>
<html>
  <head>
    <link rel="stylesheet" href
      ="my_model.css">
    <script src="my_model.js">
      </script>
    <script src="https://cdn
      .jsdelivr.net/npm
      /tensorflow/tfjs@latest
      /dist/tf.min.js"></script>
    <script src="https://cdn.jsdelivr.net
      /npm/@teachablemachine/image@latest
      /dist/teachablemachine-image.min
      .js"></script>
    </head>
    <body>
      <h2>Teachable Machine Image
        Model</h2>
      <button type="button" onclick
        ="init()">Start</button>
      <div id="webcam-container">
        </div>
      <div id="message"></div>
      <div id="label-container"></div>
    </body>
  </html>
```

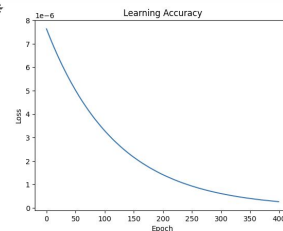
Teachable Machine Image Model



100% Acc
10000
100.00%



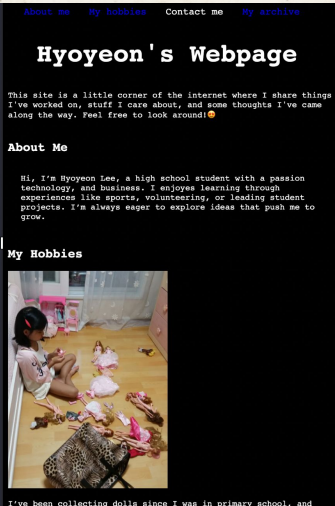
```
[ ] #Visualize the learning accuracy
plt.plot(history.history('loss'))
plt.title('Learning Accuracy')
plt.xlabel('Epoch')
plt.ylabel('Loss')
plt.show()
```



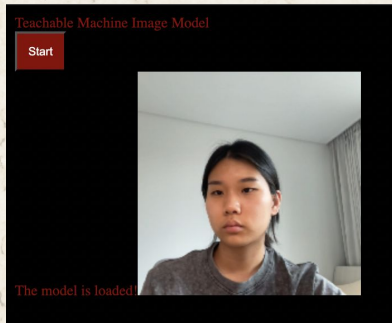
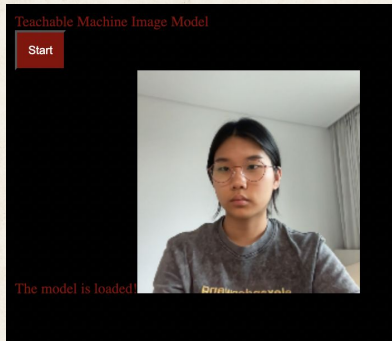
Hyoyeon

Website w/HTML & CSS

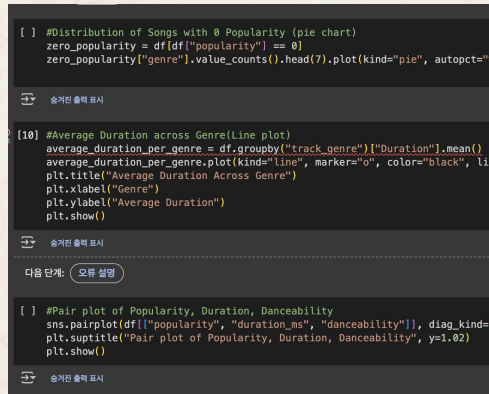
```
6 <script type="module" src="script.js"></script>
7 <title> Hyoyeon's Webpage </title>
8 </head>
9
10 <body>
11
12 <nav>
13 <a href="#about"> About me </a>
14 <a href="#hobbies"> My hobbies </a>
15 <a href="#contact"> Contact me </a>
16 <a href="https://mail.google.com/mail/u/0/?tab
  =rm&ogbl#search/gather
  /FMfcg2ZTZVcQvxiKXNZLvqKqBDJbQKc" target="_blank">
  My archive</a>
17
18 </nav>
19
20 <section>
21 <h1> Hyoyeon's Webpage </h1>
22
23 This site is a little corner of the internet where I
24 share things I've worked on, stuff I care about,
25 and some thoughts I've come along the way. Feel
26 free to look around! 🌟 </p>
27 </section>
28
29 <br>
30
31 <section id='about'>
32 <h2> About Me </h2>
33 <p> Hi, I'm Hyoyeon Lee, a high school student with a
34 passion technology, and business. I enjoys learning
35 through experiences like sports, volunteering, or
36 leading student projects. I'm always eager to
37 explore ideas that push me to grow.
38
39 </p>
40 </section>
```



Teachable Machine



Spotify Analysis w/Google Colab



Juhee

Website

Teachable machine

```
<!DOCTYPE html>
<html>
<head>
  <title>My Hobbies</title>
  <link rel="stylesheet" href="styles.css">
  <meta name="viewport" content="width=device-width, initial-scale=1">
</head>
<body>

  <nav>
    <a href="#Juhee">My hobby</a>
    <a href="#my family">My family</a>
    <a href="#contact">contact</a>
    <a href="#">My favorite website</a>
  </nav>
  <header>
    <h1>Juhee</h1>
  </header>

  <section>
    <h2>1. My hobby</h2>
    <p>My hobby is playing piano. I started it at 7. And I'm keep doing it because the sound moves my mind.
```

My hobby My family Contacts My favorite website

Juhee

1. My hobby

My hobby is playing piano. I started it at 7. And I'm keep doing it because the sound moves my mind.

My favorite songs

- Flight of the Bumblebee
- Chopin-Etude Op.25 No.11 "Winter Wind"

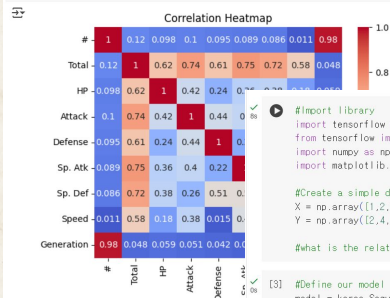
2. My family

There are five people in my family. Parents , sister, and brother. And speacil family is Tori which is my dog. He came to our home last winter. But I feel like we lived for 10years.



Google colab

```
numerical_value = df.select_dtypes(include=["number"])
correlation_matrix = numerical_value.corr()
sns.heatmap(correlation_matrix, annot=True, cmap="coolwarm")
plt.title("Correlation Heatmap")
plt.show()
```



```
#import library
import tensorflow as tf
from tensorflow import keras
import numpy as np
import matplotlib.pyplot as plt
```

```
#Create a simple data
X = np.array([1,2,3,4,5,6,7,8,9,10])
Y = np.array([2,4,6,8,10,12,14,16,18,20])
```

```
#what is the relation between X & Y : Y=2X
```

```
[3] #Define our model (ANN)
model = keras.Sequential([
    keras.layers.Dense(1, input_shape=[1])
])
```

```
/usr/local/lib/python3.11/dist-packages/keras/src/layers/core/dense.py:87
super().__init__(activity_regularizer=activity_regularizer, **kwargs)
```

```
[4] #Compile model
model.compile(optimizer='sgd', loss='mean_squared_error')
```

```
[5] #Train the model
history = model.fit(X, Y, epochs=500, verbose=0)
```

```
#Make prediction to evaluate the model's performance
new_X = np.array([15])
predictions = model.predict(new_X)
print("The prediction for the new variable is:" , predictions)
```

```
1/1 ----- 0s 50ms/step
The prediction for the new variable is: [[29.952728]]
```